THE TRADITIONAL BIRTH ATTENDANT IN SEVEN COUNTRIES
Case Studies in Utilization and Training

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INTRODUCTION

"Traditional medical practitioners and birth attendants are found in most societies. They are often part of the local community, culture and traditions, and continue to have high social standing in many places, exerting considerable influence on local health practices. With the support of the formal health system, these indigenous practitioners can become important allies in organizing efforts to improve the health of the community. Some communities may select them as community health workers. It is therefore well worth while exploring the possibilities of engaging them in primary health care and of training them accordingly."

As part of its programme to promote community participation in primary health care, the World Health Organization collects and disseminates information that may help countries to improve the contribution of their traditional birth attendants to the health of mothers and children. The most important sources of such information are, of course, the countries that have already made considerable progress in the development of TBA training programmes.

The case studies presented in this volume were undertaken to share experiences on a variety of aspects of the training of TBAs and their use in health services. Even though there is a great diversity of TBA practices from one culture to another, experience in one country with TBA training, supervision, evaluation and practices can be of great value and interest to others. Each of the case studies, except that for Sri Lanka, focuses on a special aspect of the TBA programme, and all describe the training and use of TBAs and indicate the value and relevance of the programme in each country. The Sri Lanka case study explores the possibility of training TBAs as low-cost means of further improving family health services in the country.

The health needs of women and children, particularly those living in rural areas of developing countries, are not being adequately met. Infections, malnutrition and the complications of pregnancy and childhood continue to take a heavy toll of life for many reasons, among them inadequate health care coverage, poverty, ignorance, and changes in the social environment. In

4 Traditional birth attendants. An annotated bibliography on their training, utilization, and evaluation, unpublished working document HMD/NUR/79.1 (a limited number of copies is available to professionally interested persons upon request to Nursing, Division of Health Manpower Development, World Health Organization, 1211 Geneva 27, Switzerland).
many countries several decades will pass before national resources will be sufficient to allow for the development of an adequate number of qualified staff to provide essential health services for the whole society. Recognizing these factors, the World Health Organization has been promoting the use of trained traditional practitioners as one among several approaches to meeting the basic health needs of people.

Traditional practitioners already form a considerable part of the basic core of primary health workers for the majority of the rural population in many developing countries. Of this work force traditional birth attendants constitute the major portion. For example, the Philippine survey in 1973–74 revealed 31,000 TBAs in the country—a ratio of at least one TBA for every 200 women in the reproductive age group of 15–44 years.

This publication describes efforts that have been made by six countries to establish TBA training programmes. It also describes the reasons why, in a seventh country, it is considered that a TBA training programme should be established. Each of the studies provides a general picture of the training and use of TBAs in the country concerned; in addition, some of the studies elaborate upon a special feature. The Philippines, for example, is the first country to have carried out a nationwide survey of TBAs, and the methodology and findings of that survey are elaborated in some detail. In the case of the Sudan, the more advanced programme for training young women to become “village midwives”, who appear to have largely replaced the “conventional” TBAs, receives special attention. In the Thailand report, the special feature is the training, use, and impact of TBAs in the national family planning programme.

Numerous problems underlie the development of TBA training programmes and the use of TBAs in health care work. In many developing countries, it may be a long time before these fundamental problems are resolved. In the meantime, however, decisions will continue to be made explicitly or implicitly for or against the training and use of TBAs. To assist those who have to make these decisions, a number of the questions that must be asked are posed and discussed in Chapter 8.
CHAPTER 1

ECUADOR:

TBA TRAINING PROGRAMME, SUPERVISION, EVALUATION, AND FOLLOW-UP SERVICES

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INTRODUCTION

In Ecuador—the second smallest country in South America—traditional birth attendants (TBAs) work mainly in the isolated rural areas, where women have high fertility rates and where there is little demand for conventional health services. In 1976 the Ministry of Public Health began to carry out a strategy for recruiting, selecting, and training TBAs so as to link them to the health care system. This chapter will outline the traditional practices of untrained TBAs, sketch in the background to the decision to train them, and then describe the recently developed training programme, the supervision and evaluation of TBAs, and follow-up services.

The present case study is based on: data collected by the authors; a manual for establishing TBA programmes in the provinces (2); material gathered for a thesis by a group of sixth-year students at the Carmen Barona Normal School in Ambato, Tungurahua Province (1); an evaluation of the Ministry of Public Health’s TBA training programme (4); and data available to WHO.

The registration of vital statistics remains difficult in Ecuador, and the data presented in this chapter should be viewed with this in mind.

REASONS WHY THE TBA TRAINING PROGRAMME WAS ESTABLISHED

Although small, Ecuador is exceedingly diverse in its geographic and climatic characteristics—ranging from coastal regions to mountains and
islands—and in its ethnic composition, the population being composed of Indians, Negroes, whites, Spaniards, and people of mixed origins. The high Andes and the isolated tropical rain forests near the Amazon pose serious transport and communication problems, compounded by the diversity of cultures to be found within the country. Approximately 40% of the population can be considered as urban; among the remaining rural population there is a great variety of traditional cultures. Roman Catholicism is the predominant religion.

Petroleum, the principal source of foreign exchange, has been a major factor in the financing of economic and social development programmes which have significantly improved health conditions. However, the situation is still far from satisfactory in the rural areas, where lack of adequate housing, water, and sanitation still contributes greatly to high morbidity and mortality. There does not appear to be a serious shortage of health care facilities overall, but in rural areas the people make little use of the facilities that are available. As the Ministry of Public Health has noted:

One of the most persistent phenomena to have emerged in the rural settlements in Ecuador where health services are being installed has been an, at times, very serious shortage of demand for those services relative to the real or estimated capacity of the facility... Research in this area of behaviour of demand has been neither very sustained nor systematic... The most common premise... to explain problems of insufficient public demand for health services has been associated with modernization theories that assert... that peasants, steeped in a fatalism that excludes the outsider and springs from the circumstances of the life they lead, have become acutely fearful and suspicious of outsiders, have been no "interest" in programs imposed from above, and mistrust both physician and health services... Our approach here has been to seek ways in which the people can participate in the research, planning, conduct and evaluation of communication carried out on practical health matters (1).

This mistrust does not appear to apply to the TBAs, who work in their own communities and have profound knowledge of their cultural values and traditional beliefs. In that respect the TBAs do not symbolize the intrusion of foreign values, unlike conventional medical practitioners, and as such they are not perceived as a threat.

The Ministry of Public Health in Ecuador, recognizing the value of using such community resources for the promotion of minimum health services among the rural and isolated population, thus began in 1976 to implement a strategy for recruiting, selecting, and training TBAs. The strategy called for TBAs to be articulated with the health care system and progressively to assume the task of promoting and improving health care, particularly care during pregnancy, pre- and postnatal care, delivery, care of the newborn and of children, and family planning advice. The general objective was to reduce maternal and child morbidity and mortality. It was also hoped that, with the training of TBAs, births and deaths would be registered and information on morbidity and mortality in rural areas would be obtained.

More specific objectives include (2):
— promoting the demand for health services in the community;
— educating pregnant women and mothers about basic care of themselves and of their newborn children;
— achieving effective coordination between the local health unit and the community and developing health programmes.

The information provided below on the role and practices of untrained TBAs and on the health of women and children and the care available to them sheds further light on the Ministry’s decision to start a TBA training programme.

Role and status of untrained TBAs

The TBA in Ecuador (I) is generally a person over 40 years of age who has had years of experience in delivery care. The work is generally performed as a community service or a social responsibility, by which the TBA has earned the confidence and respect of her community. She is however, paid for her services according to the difficulty of the delivery, sex of the child, kin relationship of the TBA to the mother, the patient’s financial situation, or the amount the patient wishes to give.

Some TBAs take up the profession after having been taught the practices by their grandmothers. Others learn the techniques while working in health establishments, with doctors, or while taking a first-aid course. Both women and men can become TBAs, although women dominate the profession. Most TBAs have other regular occupations and work as domestics, farmers, rural manual workers, or at some type of craft.

Untrained TBA practices

Traditional practices of untrained TBAs (I) include such procedures as adjusting the position of the fetus, massaging the abdomen of the pregnant woman, advising on diet, and administering medicinal potions.

During the initial stages of labour, the TBA washes her hands. The pregnant woman is fed chicken broth and tea laced with brandy, which is thought to bolster her strength during labour and help speed delivery. The mother is encouraged to walk about the room. Vaginal palpation is used to determine how soon and how fast the baby is coming, and a fatty substance is applied to the mother’s abdomen.

The position the mother assumes during the actual delivery depends upon previous experiences or local traditions. Possible positions include kneeling, reclining, sitting over a basin, standing, or suspension by the armpits.

No further information is currently available on the TBAs’ actual procedures during delivery or on their practices if complications develop.

The infant is received in a clean cloth. Eyes, ears, nose, and mouth are washed with lukewarm water. To stimulate respiration, the baby is fanned with a cloth and slapped on the buttocks and chest.

Various instruments are used to cut the umbilical cord: scissors, razor blades, a sharp-edged plant known as sigse, or a knife. A strong native
thread, *chillo*, is used to tie the cord. Thiomersal, salve, or petroleum jelly (Vaseline) is applied to the navel and a dressing of clean cloth is applied and held in place with a navel bandage. The criteria used to decide where to cut the umbilical cord vary with the traditions of each community. Some examples are:

- For boy babies, a 3-finger length is measured: it is believed that anything over this length will make the baby grow up to be a scoundrel.
- For girl babies, a hand’s breadth is used: any shorter, and the girl will be too narrow in the hips.
- In some places, a *gene* (the distance from the tip of the outstretched thumb to that of the index finger—about 12–15 cm) is measured off for both boys and girls. With less than that a girl might have a small uterus.

If the placenta is not expelled immediately, a receptacle with heated brandy may be placed close to the vagina to help loosen the afterbirth, a feather may be inserted in the throat, or the mother may be made to swallow a raw egg or almond oil. Unless she is haemorrhaging, the mother is sometimes rubbed with belladonna salves or lotions and bound tightly in sheets from waist to knee for 3 days. This procedure, known as *encaderamiento*, is believed to help the pelvic bones resume their normal position.

Although some TBAs are known to provide advice on abortion methods and to treat gynaecological disorders, as a rule their sole activity in MCH care is centred on delivery. On average TBAs conduct 2 deliveries a month. They may also participate in baptismal and funeral rites.

**Health status of women and children**

Ecuador, with its population of approximately 7.556 million in 1977 (5), is demographically a young country: 43% of its population was under 15 years of age in 1977. With a 3.5% annual rate of growth—largely due to the decrease in the death rate—the country is one of the fastest growing in the world (7). The birth rate for 1975 was 31.3 per 1000, down from 48 per 1000 in 1920–24 (5).

The health problems of women and children in Ecuador are rooted in poverty, which is widespread but especially prevalent in the rural areas. Poor housing, inadequate drinking-water supply, lack of sewerage facilities, improper hygiene, and malnutrition can be cited as basic determinants of poor health. In addition there is a high fertility rate in the rural areas: rural women have on average 7.7 births, as compared with 4.4 births for women with secondary or higher education (7). Combined with a young average maternal age and short intervals between births, this high fertility rate contributes to a high infant and maternal death rate. Among pregnant women who were registered, the maternal mortality in 1974 was 2.3 per 1000 live births (7). Since many more urban and upper socioeconomic level women register than rural and/or poor women, the true maternal mortality rate must be much higher.
The cause of death was recorded in about half those registered; among these, 34% were attributed to toxaemia of pregnancy, 32% to pre- and postpartum haemorrhage, 18% to abortion and unspecified causes, and 16% to puerperal sepsis (2). Thus a substantial proportion of maternal deaths can be traced directly to lack of proper antenatal care and insanitary delivery practices.

Child health is influenced by some of the same factors which affect maternal health: birth spacing, maternal age, nutritional status, pre- and postnatal care, delivery environment, and conditions of hygiene.

In 1977, the infant mortality rate was reported to be 65.8 deaths per 1000 live births, down from 180 per 1000 in 1915 (5,7). Deaths of children under 5 years of age accounted for 50% of the total deaths in 1971 (2). Gastroenteritis and other diarrhoeal diseases are listed as the major cause of death of children under 5, followed by diseases of the respiratory system, measles, and tetanus (6).

In a survey conducted some years ago by the Instituto Nacional de Nutrición it was found that 40% of preschool children were suffering from protein-energy malnutrition, of whom 29% had first-degree, 9.6% second-degree, and 1.2% third-degree malnutrition. The most prevalent nutritional problem in the school-age group was endemic goitre, which affects other age groups as well.

Prolonged breastfeeding is customary in Ecuador, lasting up to 1 year of age for 80% of babies in urban and 87% of babies in rural areas, according to the same survey.

There is little information available on the prevalence and incidence of diseases among children.

**MCH facilities, personnel, and care**

According to the Ministry of Public Health, the following health establishments were functioning in 1977:

<table>
<thead>
<tr>
<th>Establishment</th>
<th>Number</th>
<th>Inpatient beds</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>37</td>
<td>5730</td>
<td>Main cities and provincial capitals</td>
</tr>
<tr>
<td>Hospital health centre</td>
<td>64</td>
<td>1952</td>
<td>Cantonal capitals</td>
</tr>
<tr>
<td>Urban health centre</td>
<td>68</td>
<td>—</td>
<td>Urban centres</td>
</tr>
<tr>
<td>Health subcentre</td>
<td>354</td>
<td>—</td>
<td>Parishes with over 1500 people</td>
</tr>
<tr>
<td>Health post</td>
<td>191</td>
<td>—</td>
<td>Villages with under 1500 people</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>721</td>
<td>7682</td>
<td></td>
</tr>
</tbody>
</table>

Paediatrics and obstetrics and gynaecology services are offered on an inpatient basis by specialized and university hospitals (located in the major cities), by referral hospitals, in provincial capitals, and by hospital health centres located in cantonal capitals. Many of these establishments also offer outpatient MCH services.
Health subcentres, located in parish subdivisions, are staffed by a doctor, an auxiliary nurse, a dentist, an auxiliary dentist, and a sanitary inspector: they offer mainly outpatient services. Villages of less than 1500 usually have a health post staffed by 1 auxiliary nurse who does home visiting. The post is visited about twice a month by a health team similar to the one working in a subcentre.

Patients are referred from health posts to health centres or hospitals; however, owing to the constraints of transportation costs, availability, and time elements, many patients are not seen for referral.

The people living in isolated rural areas—25% of the population, or 1.8 million—do not benefit from the static health care facilities but are served by traditional healers and birth attendants.

The following health personnel were available in 1977, according to the Human Resources Division of the Ministry of Public Health:

<table>
<thead>
<tr>
<th>Type</th>
<th>No. to the country</th>
<th>No. working for Ministry of Public Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>4 664</td>
<td>1 459</td>
</tr>
<tr>
<td>Dentist</td>
<td>1 643</td>
<td>325</td>
</tr>
<tr>
<td>Obstetrician</td>
<td>308</td>
<td>215</td>
</tr>
<tr>
<td>Graduate nurse</td>
<td>1 388</td>
<td>489</td>
</tr>
<tr>
<td>Nursing auxiliary</td>
<td>10 300</td>
<td>2 076</td>
</tr>
<tr>
<td>Technical auxiliary</td>
<td>1 121</td>
<td>446</td>
</tr>
</tbody>
</table>

Ecuador’s doctor/population ratio of 1:1600 is quite high considering the general socioeconomic level of the country. It results from the fact that the national university has no restrictions on the number of medical students it admits. As shown above, almost one-third of the country’s physicians worked for the Ministry of Public Health in 1977. Unfortunately, few doctors are engaged in public health practice and still fewer leave the capital or the major cities to provide care in the rural areas (7).

The Ministry has a programme for placing medical students in the rural areas as a prerequisite for graduation. However, public health training, adequate supervision, and prior orientation to the rural areas are essential for such a programme to be effective. This is not yet the case, with the result that medical services actually provided by students are limited.

As is apparent from the above figures, Ecuador has a serious shortage of professionally trained nurses. The Ministry has difficulty in retaining even the small proportion of nursing personnel it employs, because of the relatively low salaries paid. After fulfilling initial contract requirements, nurses and nursing auxiliaries (the latter trained by the Ministry) will leave for higher-paying jobs with the Social Security Institute or with the Armed Forces.
Policies and legislation affecting MCH care

The Ministry of Public Health was created in 1967 and only in 1977 took over the responsibility for health in rural areas. The Minister is advised by a National Health Council. Functions are divided between an Under-Secretariat of Public Health and an Under-Secretariat of Environmental Health and Sanitary Works. The National Family Health Department under the Directorate of Public Health is responsible for nationwide implementation of MCH and the family welfare programme, which has high priority under the national health plan. The plan has among its objectives:

— to decrease the risk of maternal and child morbidity and mortality associated with human reproduction through increased coverage by maternal care and birth control services;

— to develop a system whereby professional, technical, administrative, and auxiliary personnel both in service and in training can undergo training and advanced study in the areas of MCH care, human reproduction, and population;

— to develop administrative and operational skills at the managerial and executive levels of the programme.

The Government has precise targets for services. In 1972, only about 13.5% of pregnant women received prenatal care; the target for 1977 was to treat 40.2% and the achievement was 33%. In 1970, 28.1% of deliveries were attended by professional personnel; the target for 1977 was 53.4% and 36% was achieved (7).

Family planning services are supposed to be integrated into the Ministry’s network but are not widely available yet. Existing regulations specify that only physicians can provide family planning devices. Nurses and nursing auxiliaries are not allowed to dispense pills or insert intrauterine devices without medical supervision. Nor are health personnel trained to give information about family planning, which in part explains the poor performance of family planning services: potential users may not know the services exist. Thus, it is mainly the attitude toward family planning of the doctor in charge of the medical facility that determines the facility’s involvement in it.

SUPPORT FOR TBA TRAINING AND UTILIZATION

The National Family Health Department is the technical MCH unit of the Ministry that has worked the hardest to obtain the funding and technical support needed to implement the TBA training programme in Ecuador. As the executing unit for the programme, it is responsible for enlisting technical support and financing through agreements with domestic and international funding organizations such as UNFPA and the national Government.

1 Formerly the National Health Care Promotion Division.
Although the trained TBAs are not part of the governmental health care structure, it is hoped that they will collaborate with it through the referral system by sending on problem cases they have identified and promoting the use of health care facilities.

INVENTORY OF TBAS

No official inventory has been made of the TBAs in Ecuador. However, an approximation can be arrived at by multiplying the 1.8 million rural residents served by traditional healers by the birth rate, 31.3/1000, giving 56,340 births a year. If TBAs average 2 deliveries a month or 24 a year, 2348 TBAs would be required to deliver the approximately 56,340 babies.

THE TRAINING PROGRAMME

Planning of the training programme

The training department of the National Family Health Department plans the instruction given in the training courses. Instruction is based on the functions defined for the TBAs by means of concrete educational objectives and curriculum methodology. A standardized teaching model is used throughout the country.

Provincial governments are administratively responsible for the execution of local training programmes. The responsibility for management of the courses, in almost all the provinces, is delegated to the provincial nurse in charge or her assistant. Nurses are chosen for these responsible tasks since a large percentage of the techniques to be taught to the TBAs are appropriate to nursing. These nurses also have the required technical and administrative knowledge of public health.

Before a course is conducted the following information is collected at the provincial level (2):
— background and justification for the course (a diagnosis of MCH problems in the area);
— identification of the people responsible for teaching the course;
— information on the place where the course will be conducted and the availability of teaching materials, e.g., audiovisual materials;
— information on the selected TBAs: age, schooling, number of births attended per month, personal appearance, community where they work, place of origin;
— complete budget for the course.
Also included are the scheduled dates and a timetable listing the number of hours to be devoted to theoretical and practical instruction in the course. The information is then forwarded to the National Family Health Department for approval and funding as well as for technical help and support as needed. The Department determines which provinces shall be allowed to conduct a training course on the basis of demonstrated needs and priorities as regards maternal and child morbidity and mortality.
The trainers

The person responsible for doing the training is primarily the chief provincial nurse or someone delegated by her. She is aided by an obstetrician who highlights the role of a physician in the community in order to promote coordination of activities. A nursing aide also participates in the training programme. As her role in the rural health subcentres also influences the delivery of health care, the aide helps supervise the student’s mastery of nursing procedures and techniques and defines her own role in relation to the TBA’s functions.

Prior to the start of a training programme, the teaching staff is briefed on the prevailing customs in the area, such as attitudes towards diet, pregnancy, delivery, and childbirth.

Recruitment of TBAs for training

The provincial health bureaus (Jefaturas Provinciales de Salud) appoint local rural health doctors and auxiliary personnel to recruit TBAs, both female and male. Other community leaders also cooperate in recruitment, such as the head of the civil registry office, the political leader, and the parish priest.

Prospective candidates are then contacted by written invitation signed by a local authority; oral messages are conveyed by persons in contact with the candidates, and even house-to-house searches are conducted by health care personnel to find specified TBAs.

Once the potential trainees have been identified and contacted, a nurse will interview 20–25 candidates. Selection is governed by (3):
- age (30–65 years is the usual span but the upper limit may be transgressed in the case of older women in good health who continue to command respect and whose services are in demand in the community; the same flexibility applies to those under 30);
- good physical and mental health;
- desire for training;
- previous education (although literacy is not required and many candidates are illiterate);
- standing and relationship with the community;
- number of deliveries assisted each month;
- personal appearance.

On the basis of these criteria and a personal interview, the provincial teaching team finally chooses the candidates they consider most suitable for training. Once selected the TBAs rarely turn down the opportunity for training. Frequently, more students show up for the training programme than the maximum number allowed—15 TBAs. Only in exceptional cases, however, will this maximum be exceeded.
Course content and methods of training

In accordance with the skills of the TBAs and the specific objectives of the general training programme (see page 16), the basic aims are to equip the TBAs (a) to recognize their role in the community; (b) to improve their services and become aware of their obligations and limitations; (c) to provide satisfactory care for a normal delivery, using aseptic techniques; and (d) to correctly handle referrals to the nearest health service facility.

The entire training period usually lasts 10–15 days. The course content is divided into 3 principal units:
— promotion work;
— practical delivery care;
— system for referral to health service facilities.

The promotion unit consists of guided discussions and the acting out of short dramatized social situations aimed at encouraging the use of health service facilities. The TBA, as the community’s primary motivator for these services, learns about the detection of early pregnancy for referral and the importance of referring recent births, nursing infants, preschool children, and cases for family planning to the health service facility. Approximately 20% of the training time is allotted to promotion work.

The unit on practical delivery care takes 70% of the training time and covers all aspects of pre- and postnatal, delivery, and newborn care. The unit includes practical instruction by means of demonstration techniques, which are then repeated by the trainee, and supervised practice in rural settings.

The third unit, comprising practical exercises concerned with the referral system, occupies 10% of the time.

Thus far, no mimeographed material or printed manual has been available as a text for the course, although a Graphic manual for the use of the TBA was in preparation at the time of writing. Moreover, there are no suitable educational films and not enough practice dummies.

Other aspects of the training programme

Arrangements are generally made to lodge the TBAs during the course, as they usually live far away. Those who live nearby make the round trip daily; others may stay with friends or relatives in the area.

Although the training course includes basic instruction on parental responsibilities, family planning and spacing, birth control methods available at the health service facilities, and the importance of referring people interested in birth control to them, the TBAs are not allowed to supply contraceptives, nor are they given any instruction on the possible side-effects of birth control methods.

The TBAs are called Rural Voluntary Collaborators once they have completed the training course. Each receives a work satchel with the necessary instruments for conducting home deliveries, which she is expected
to use according to the techniques and procedures taught during the training course.
Each trained TBA is given an identification card which is renewed annually on the basis of a physical check-up and an evaluation of the services rendered.

**Evaluation of teaching/learning**

Since the majority of TBAs are illiterate, the participants in the training course are evaluated orally by the trainers. The first evaluation is made before the start of the course to provide a base from which to measure the increase in knowledge. Responses are tabulated and areas of weakness identified. The second formal evaluation—*informal* evaluation of teaching techniques and learning behaviour takes place constantly—occurs halfway through the course and serves as the basis for making any adjustments needed in the second half. The final evaluation measures the knowledge that has been acquired during the course by the TBA and also points up any areas of weakness on the part of the trainers or of the teaching material.

The forms used by the evaluators are shown in the Annex (pages 22–26).

**Training statistics**

The Ministry of Health has trained 530 TBAs since the start of the programme in 1976 and plans to train approximately 150 TBAs each year. Since is it not known with any precision how many TBAs are practising in the country, one can say only that the 530 represent about 20% of the estimated total of 2700.

**ADMINISTRATIVE ARRANGEMENTS FOR THE UTILIZATION OF TRAINED TBAS**

**Supervision**

TBAs are assigned to specific health establishments, but they are not considered as health care personnel nor do they receive remuneration from the Government for their services. Once TBAs have been trained to practise legally in the rural areas their practices are monitored by nursing and midwifery personnel from the local health subcentre or hospital.

Follow-up visits are scheduled every 3 months for the first year after training, every 6 months for the second year, and once a year thereafter or whenever circumstances warrant. Follow-up visits are conducted by nursing auxiliaries from the local health subcentre or by the nurse or midwife from the provincial hospital. The objectives of follow-up visits are:

--- to give the TBA reliable guidance in carrying out her activities;
--- to ensure that the experience and skills acquired are put to use and that traditional habits are progressively corrected;
— to encourage a closer relationship between the TBA and the health subcentre personnel;
— to improve her skills in the performance of technical tasks through supervision;
— to establish better relations between the TBA and the community;
— to obtain data on the TBA’s work for the statistical information system;
— to evaluate the long-term effects of the extension of MCH and family welfare services on the country’s maternal and child morbidity and mortality patterns.

**Referral**

The TBA’s referral of patients to hospitals, hospital/health centres, or subcentres is facilitated by a system of coloured vouchers with pictures of the various complaints. White vouchers are used for routine referral of uncomplicated pregnancies to the local health subcentre. A red voucher is given to a woman with a complication of pregnancy who should go directly to the nearest hospital. Blue vouchers are used for referral to the health subcentre for routine infant care and pink vouchers for routine postnatal care. Green vouchers are given for referral to the family health unit of the health subcentre. Cases requiring special care can be referred directly to a hospital.

The vouchers have two sections: the section with a picture of the complaint is retained by the TBA (and collected periodically by health subcentre personnel at the time of follow-up visits), and the other section states in capital letters the reason for referral and goes with the patient to the health centre.

**PERFORMANCE AND IMPACT OF TRAINED TBAs**

A study has been conducted in Ecuador on the performance of trained TBAs (4). Although the data analysis is not yet available, preliminary data indicate that the trained TBA is able to recognize most of the usual signs and symptoms of early pregnancy and its complications. Most TBAs refer pregnant women with complications to health facilities but for the most part they attend normal pregnancies themselves. Some TBAs follow the techniques they learned in training; others continue to use the traditional methods.

No evaluation has been made of the impact of trained TBAs on the health status of women and children in rural areas.

**CONCLUSION**

In recognition of the special problems of Ecuador—including its geophysical, ethnic, and cultural diversity—the Ministry of Public Health developed an innovative approach for making the best use of the
communities' own resources for maternal and child care: the traditional birth attendant. In 1976, the Ministry launched an ambitious programme for training selected TBAs and evaluating their performance and continuing education. In only 3 years an estimated 20% of TBAs have received training in proper procedures for deliveries, pre-and postnatal care, and newborn care.

A particular problem in Ecuador is that the established health care facilities in some parts of the country are greatly underutilized despite proven need. Thus an additional responsibility that has been given the TBAs is that of promoting the use of the health care system.

It is too soon to make a satisfactory evaluation of the TBA training programme or to assess its impact on health. Early reports suggest that many of the TBAs are learning and are changing their practices, although some revert to their old habits. A study is in process that should provide the basis for determining what changes can usefully be made to improve the programme.

REFERENCES


4. MINISTRY OF PUBLIC HEALTH, NATIONAL BOARD OF FAMILY HEALTH. Partial data from evaluative study of CVRs, Ecuador, 1979.


Annex

FORMS FOR THE USE OF EXAMINER IN EVALUATING TBAs BEFORE, DURING, AND AFTER TRAINING COURSE

Initial evaluation before TBA course

Name of TBA: ........................................................................................................................................................................

Date: ...................................................................................................................................................................................

1. How do you recognize that a woman is pregnant? ("expecting", "with child"—use the term best known to the TBA)
                                                                                     ........................................................................................................................................................................

2. Do you administer any care to a woman who is pregnant? ("expecting", or "with child")
   [ ] YES [ ] NO
   (If the answer is yes): What kind of care do you give her?
                                                                                     ........................................................................................................................................................................

3. Do you give her any advice?
   [ ] YES [ ] NO
   (If the answer is yes): Advice on diet: .................................................................................................................................
   On hygiene: .............................................................................................................................................................................
   Other advice (specify): ............................................................................................................................................................

4. How do you know that delivery is only a few days off? .................................................................................................

5. Do you know how to calculate the possible date of delivery?
   [ ] YES [ ] NO
   (If the answer is yes): How do you calculate it? ....................................................................................................................
                                                                                     ........................................................................................................................................................................

6. Before attending the delivery, what do you do:
   (a) As regards the mother? ...................................................................................................................................................
   (b) As regards the house? .......................................................................................................................................................
   (c) As regards yourself? ...........................................................................................................................................................

7. What position does the mother get into to give birth? ........................................................................................................
                                                                                     ........................................................................................................................................................................

8. What things do you use for attending the delivery? ...........................................................................................................
                                                                                     ........................................................................................................................................................................

9. How do you know that the woman is going to have a normal delivery?
                                                                                     ........................................................................................................................................................................
10. What do you do when the woman cannot give birth?

11. How long do you wait for the placenta to come out?

12. When the placenta does not come out, what do you do?

13. What do you use to cut the cord?

14. What do you use to dress the cord?

15. About how many babies have you seen with the seventh day illness (tetanus)?

16. Do you put anything in the baby’s eyes?
   - YES
   - NO
   (If the answer is yes): What do you put in?

17. Do you visit the woman after delivery?
   - YES
   - NO
   (If the answer is yes): How many days after the delivery?

18. For what purpose do you visit the woman?

Name of the person asking the questions:

Functions:...
Intermediate evaluation during TBA course

Name of TBA: .................................................................

Date: ..............................................................................

1. Name some female reproductive organs: ....................................

2. Name some male reproductive organs: ......................................

3. How do you know when a woman is pregnant? ..........................

4. In what part of the woman's organs does fertilization take place?

5. What are the danger signs during pregnancy? ............................

6. When should a pregnant woman go to see a physician? ........................

7. What advice do you give to a pregnant woman? ...........................

8. (a) In what cases do you send a woman in labour to hospital? ........................

   (b) In what cases do you send her to the health subcentre? ............

9. How do you get ready to attend the delivery? ............................

10. What does the equipment bag contain? .....................................

Name of the person asking the questions: ......................................

Functions: ...........................................................................

24
Final evaluation at end of TBA course

Name of TBA: ..............................................................................................................

Date: ...........................................................................................................................

1. Mention 5 danger signals during pregnancy: ...........................................................

.................................................................................................................................

2. Mention 5 danger signals during labour: ............................................................... 

.................................................................................................................................

3. What must you do when you encounter one of these danger signals in pregnancy and 
labour? .....................................................................................................................

.................................................................................................................................

4. Which instruments must be boiled? .........................................................................

.................................................................................................................................

5. Mention some signs indicating possible abortion: ............................................... 

.................................................................................................................................

6. How do you help the mother during the birth of the child? 

.................................................................................................................................

7. (a) What care do you give to the newborn baby? ....................................................

.................................................................................................................................

(b) What must you not do with the newborn baby? ....................................................

.................................................................................................................................

8. (a) Mention 4 danger signals in the newborn baby: ..............................................

.................................................................................................................................

(b) What must you do when you come across one of these signals? ....................... 

.................................................................................................................................

9. Mention 5 signs for determining that the child is premature: ............................... 

.................................................................................................................................

.................................................................................................................................

.................................................................................................................................

25
10. What must you do with all babies who have been born in your care?

11. State what precautions you must take in cutting the umbilical cord:

12. (a) As soon as the placenta comes out, what must you do?...

(b) If it has not come out after an hour, what must you do?...

13. What care do you give the mother after the delivery and for how many days?

14. Do you think it is important to have a medical check-up after delivery?
   □ YES   □ NO
   Why?...

15. Do you think family planning is important?
   □ YES   □ NO
   Why?...

16. If a couple asks you to advise them on family planning methods, what advice would you give?

17. The health centres and subcentres distribute milk and oatmeal. Who would you recommend should apply for this food?

18. What vaccination should the child have before being enrolled at the Register Office?

Name of the person asking the questions:

Functions:
CHAPTER 2

HONDURAS:
ADMINISTRATIVE ARRANGEMENTS FOR LINKING THE TBA WITH THE FORMAL HEALTH SYSTEM

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INTRODUCTION

Honduras, a republic in Central America, is a mountainous country of 112,088 km² with a 644 km coastline on the Caribbean and a narrow Pacific Ocean shoreline of 80 km in the south. The climate is generally hot, with high humidity in the tropical lowlands of the coastal regions.

The people of Honduras are mainly of mixed Spanish-Indian ancestry. Roman Catholicism is the predominant religion.

The population, of approximately 3,300,000 in 1977, is a relatively young one, 58% being under 15 years of age. With the rapid annual growth rate of 3.5%, the projected population for 1985 is 4,500,000.

Unlike other Central and South American countries, Honduras has not experienced a significant shift in the urban-rural population ratio. Approximately 70% of Hondurans live in rural areas (7). The average annual income of a rural family—comprising 6 members—was L 657 in 1972. Poverty is, however, only one of the deterrents to good health. Education is another factor which influences the health status of the rural population. In some communities education is almost wholly confined to what is learned within the family and the local community; for many years no schools existed at all. Environmental factors are also relevant. While significant progress has been made towards improving the transport network and expanding electric power capacity, 60% of the population still have no access to piped water and an estimated 80% have no access to the sewerage system (5).

Economic programmes in Honduras suffered a severe setback in 1974 when a hurricane damaged banana plantations, which provide the country’s main export product. However, the gradual recovery of banana production and the doubling of coffee prices have since improved the economic situation. At the time of writing, the Government’s current intention is to
raise standards of living especially in the poor rural areas with new
development projects in agriculture, education, and—as described
below—health.

**REASONS WHY THE TBA PROGRAMME WAS ESTABLISHED**

The Government has placed great emphasis on the health sector within its
social programmes. Health investments increased from 2% of total
investments in 1970–74 to an average of 7% for the 1976–78 period. In
1974 the Ministry of Health developed programmes to try to bring health
services within reach of all Hondurans, particularly those scattered in
villages and hamlets. It quickly became clear, however, that no substantial
improvement in the health of the people could be expected with the health
personnel available, who were very few in number and concentrated in the
urban areas.

Government health officials had been impressed by the efficient way in
which local communities, through a system of volunteers, had collaborated
in a campaign against malaria. They felt that the same communities could
also provide volunteers for other programmes, including health care. This
creative approach established a philosophical principle which still guides
work methods today: “If our communities have the right to receive health
care from the government, they also have the responsibility to participate in
these same health activities” (4). A policy decision was therefore made in
1975 to give training courses to the TBAs, who have been responsible for
helping rural deliveries since pre-Columbian times (4).

The national health plan for 1979–83 is aimed at improving the health
and living conditions of Honduran families—especially those living in rural
areas—through the extension of MCH activities, including education and
assistance for responsible parenthood (3). The plan calls for continuing the
training programmes for TBAs, as well as for other voluntary health
personnel. The TBAs thus have an important role to play in the
Government’s current drive to make basic health care available to everyone.

**Role and status of untrained TBAs**

Members of rural communities are particularly suspicious of outsiders.
Even nurses in uniform are considered intruders since they are employed by
the Government and represent value systems which are foreign to rural
Hondurans (1). Traditional practitioners such as the TBAs are, in contrast,
often prominent members of the community. Their skills are based on
traditions handed down from family to family and they have often practised
for generations in the community.

The following description of untrained TBAs is taken from a report on the
Piñalejo TBA training programme, which was started in 1973 by the Centro
 Médico Evangelico (5). TBAs in other parts of the country have similar
backgrounds.
Most TBAs are middle-aged or older women (there are a few men). The majority are illiterate and very poor. They generally have had their own children. Some TBAs are highly thought of in the community but others are just sought out at the time of delivery. TBAs charge US $1.50–10.00 for their services according to the length of time spent with the mother and the type of chores performed (e.g., washing clothes, cooking, cleaning). If the family is very poor many TBAs will do the delivery free.

Some TBAs do deliveries only occasionally; others have a regular practice.

There is great regional variation in the practices of TBAs, some being beneficial, others harmful.

**Health status of women and children**

The health statistics from Honduras provide only the barest outlines of the health status of women and children, but even the inadequate figures available are sufficient to reveal the high morbidity and mortality rates associated with pregnancy and infancy.

The mortality rate for infants was reported as 117 per 1000 (Department of Census and Statistics, 1972) and for 1–4-year-old children as nearly 100 per 1000 (estimated from data from the Department of Census and Statistics).

Reported maternal mortality has ranged from 2.7 to 20 per 1000 live births, which even at best is very high. The reported birth rate of 48 per 1000 (Department of Census and Statistics) would imply a fertility rate of 240/1000/yr for women aged 15–44, or an average of over 7 children born to every woman in Honduras. The extremely high fertility rate and short birth intervals, coupled with the underlying poverty, low educational status, and lack of potable water and basic sanitation, all contribute to the very high morbidity and mortality rates in women and children.

Data on morbidity are even scantier than mortality data but they indicate that diarrhoea, pneumonia, malnutrition, anaemia, and malaria are the major problems among infants and children (2) and that haemorrhage and puerperal sepsis are the most serious complications of pregnancy. According to data from the Ministry of Health, there has been a decline in measles, tetanus, diphtheria, and whooping-cough but an increase in malaria, rabies, and poliomyelitis. This last increase has occurred despite the improved coverage of the population by public immunization against poliomyelitis (from 15.6% to 59.6% between 1972 and 1977) (3). The immunization programme has had to contend with severe transportation and storage difficulties as well as a shortage of disposable items, but the Government intends to effect administrative improvements in the programme, including the cold-chain and supervision, and hopes to achieve full coverage of the population by 1985.

Of the 153,540 women who gave birth in 1977, about 20% were reported to have visited a health service establishment at least once to receive prenatal
care. Approximately 18% were delivered in hospitals or other health service establishments; the remainder—82%—were delivered by TBAs. By 1977 Government-trained TBAs accounted for nearly 20% of all TBA deliveries. This proportion should rise rapidly with the planned expansion of the TBA training programme.

**MCH facilities, personnel, and care**

The provision of services in the country’s 8 health regions is arranged according to complexity or technological mix. At level I are the rural health centres, at level II health centre units with an attending physician, at level III emergency hospitals, at level IV the regional and national hospitals, and at level V the teaching hospital (Table 1).

**Table 1. Health service units of the Ministry of Health, Honduras, 1972–76**

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<tbody>
<tr>
<td>Rural health centres</td>
<td>140</td>
<td>151</td>
<td>200</td>
<td>259</td>
<td>280</td>
</tr>
<tr>
<td>Health centres with occasional physician</td>
<td>74</td>
<td>78</td>
<td>76</td>
<td>80</td>
<td>69</td>
</tr>
<tr>
<td>Emergency hospital centres</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Regional hospitals</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>National hospitals</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Mobile rural units</td>
<td>10</td>
<td>10</td>
<td>—</td>
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</tr>
</tbody>
</table>

*Source: Department of Biostatistics, Ministry of Health, Honduras.*

There are now 46 hospitals (39 national; 7 emergency) which together have 4763 beds, but the facilities are heavily concentrated in the urban areas and Region 3, which together have 29 hospitals to serve 1,227,724 inhabitants. The thinnest concentration is in Regions 5 and 7, which have 1 hospital each to serve a combined population of 587,860 (3).

There are 71 health centres with an attending physician, but 25 of these are concentrated in Region 3. The 243 rural health centres are fairly well distributed throughout the country and are usually staffed by auxiliary nurses.

There are 972 physicians, 214 dentists, and 535 professional nurses in the public and private sectors, in addition to 2411 nursing auxiliaries in the public sector. In 1977 these figures represented the following ratios per 10,000 population: 3.4 physicians, 0.7 dentists, 1.9 professional nurses, and 8.3 nursing auxiliaries (3).

The Autonomous National University of Honduras graduated 220 physicians and 32 professional nurses between 1972 and 1977, while the La Ceiba School of Nursing trained 106 nurses in that period (3). This output is too low to staff the health units needed in the country, especially since a disproportionate number of doctors and nurses remain in the urban areas.

Paramedical personnel and volunteer health workers are trained by the local Human Resources Unit of the Ministry of Health and the training
school of the Honduran Social Security Institute. From 1972 to 1977, 944
nursing auxiliaries were graduated. During the period 1974–77, 1634 TBAs,
700 representatives of health committees, and 907 health guardians were
trained (3).

Between 1972 and 1977 the number of medical and dental visits increased
by 44% and the availability of health care services for the countryside by
274%, coverage rising to 68% of the national population (3).

Policies and legislation affecting MCH care

One of the objectives of the national health plan is to bring household
potable water to 80% of the country’s urban population by 1983; this goal
has been attained for the capital city, and coverage of the entire urban
population has risen to 42% (3). For the rural areas the goal is to provide
water for 28% of the population; coverage has thus far been increased to
15%. In the urban sector the sewerage system has been provided to 75% of
the population, and another 5% has been provided with other sanitation
facilities (septic tanks and latrines). In the countryside only 0.1% of the
population is served by sewerage facilities; 22% have latrines, which is close
to the programmed 25% (3).

The family health programme comprises the following specific activities:
to prepare a programme for the comprehensive protection of families,
infants, children, and young persons; to conduct continuing training
activities for professional, auxiliary, and voluntary personnel; to provide
special training for selected personnel in MCH and epidemiology; to review
and update the information system of the Ministry so as to enable it to
improve the programming and evaluation of the MCH and family welfare
plan; and to implement an MCH project financed by UNFPA (3).

The highest priorities of the MCH programmes are to:
— reduce the risk of disease and death of mothers and children and extend
the coverage of MCH services by expanding prenatal, delivery, and
postnatal care, immunization programmes, family planning, and health
education;
— improve obstetrical and pediatric services in health facilities;
— improve preschool surveillance and treatment, with emphasis on cases of
severe malnutrition;
— strengthen the units responsible for standardizing and supervising MCH
health programmes;
— expand MCH education programmes at the community level.

SUPPORT FOR THE TRAINING AND UTILIZATION OF TBAS

The Government of Honduras has placed great emphasis on community
participation—the concept that the community itself can contribute to its
own welfare. While it has set aside a relatively high proportion of its budget
to create the physical structure of a formal health service system, it has at
the same time paid special attention to coverage of the rural areas (4). From previous experiences of dealing with community volunteers, it was found to be important to incorporate a new type of worker into the health team, namely members of the community, such as TBAs, who offer their cooperation voluntarily or for a minimal charge. TBAs, or lay midwives as they are called in Honduras, attend between 70% and 80% of all births. They are regarded as support elements in the face of a shortage of professional health personnel. It is hoped that with training and supervision they will be able to make valuable contributions to extending coverage to remote localities, where professional services are impracticable.

The Government of Honduras spent L 122,820.00 in 1978 on the training of TBAs, including per diem for students and instructors and approximately L 24,000 for equipment. The funds were provided largely by agencies such as USAID, UNFPA, UNESCO, and PAHO/WHO.

INVENTORY OF TBAS

No official inventory has been made of the number of TBAs. An approximation can be arrived at by multiplying the number of births per year—150,000—by 75% (TBAs deliver 70–80% of all births), which yields 112,500. As TBAs attend approximately 2 births a month, or 24 a year, there must be approximately 4,700 TBAs in the country.

THE TRAINING PROGRAMME

The training of TBAs is done by professional nurses, who are directly responsible for the training programme and who are supported by health promoters and nursing auxiliaries in the various regions.

Initially the training programme covered a period of 2 weeks with 8 hours of instruction a day for groups of 8–15 trainees. The courses were held in rural health centres or health centres with an attending physician.

Following an evaluation of the training programme in 1977, a new system was adopted for the training of TBAs, based on continuous teaching modules. Twelve teaching modules are provided each month; these include:

— general training, including prenatal care; identification of high-risk cases, delivery, postpartum care, newborn and infant care, family planning, and public health duties, including the recording of births and deaths;
— reinforcement of areas of knowledge found to be weak;
— introduction of new knowledge.

No further information is available to the authors on TBA recruitment, programme planning, and course content, except that there is considerable regional variation in the training programme.

The number of TBAs who have received training since 1976 has increased yearly: 421 in 1976, 757 in 1977, and 1,528 in 1978.
Administrative Arrangements for the Utilization of Trained TBAs

Hospital physicians have continued to regard the TBA as an ill-prepared person who is likely to create complications in childbirth. On the other hand, physicians working in community health regard the TBA’s role as a necessary one in view of the remoteness of the areas in which they work. However, close relationships between the two groups have not developed.

With regard to supervision and support of the TBAs, it was initially intended to include in the building plans of rural health centres a room where births could be attended by TBAs and supervised by nursing auxiliaries. Subsequently the policy was changed and the TBA was left to assist with deliveries at home. At present, nursing auxiliaries and local nurses participate in a staggered system of supervisory visits to a cross-section of TBAs in their areas. TBAs are expected to keep an accurate record of their activities. However, since an overwhelming majority of the TBAs are illiterate, they are unable to maintain the records and instead present their reports orally.

Technical support is provided as part of the continuous guidance process. The Ministry of Health is still in the process of defining the resources it has available for the supervision of TBAs and determining the scale and nature of the supervisory activities.

The Ministry of Health’s Public Health Code provides no legislative guidelines on the role of traditional birth attendants. The Medical College of Honduras has, however, laid down the following regulations governing the activities of traditional birth attendants:

**Article 12.** To be recognized as a traditional birth attendant an applicant must show a certificate or other evidence of the training she has received.

**Article 13.** Traditional birth attendants shall be registered at the nearest health establishment to the community in which they live (health centre, hospital, etc.).

**Article 14.** Their function is restricted exclusively to providing their services at normal births.

**Article 15.** They shall work closely with health institutions, especially those located in rural communities.

**Article 16.** They shall maintain contact with health centres under the programme of work and guidelines for MCH services of the corresponding health institution.

**Article 17.** They shall be required to forward a monthly report on their activities to the nearest health centre.

**Article 18.** They shall report to the Registrar of Births and Deaths within a period not exceeding 8 days on all newborn infants whose births they have attended.

**Article 19.** They shall be required to refer pathological cases to the nearest health centre or hospital.


**Article 20.** They shall also be required to refer the newborn infant and, 4 and 6 weeks postpartum, its mother to the local health centre.

**Article 21.** They shall be required to maintain their equipment and working materials in an absolutely hygienic condition in accordance with the instructions they have received from the health establishment.

**Article 22.** They shall maintain a manual of procedures for reference and documentation where necessary.

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**PERFORMANCE AND IMPACT OF TRAINED TBAs**

An evaluation conducted in 1977 showed that 4.5% or 6969 of a total of 30,539 pregnant women visiting health establishments at least once for prenatal care were referred by trained TBAs. Untrained TBAs attended 94,300 live births; trained TBAs attended 21,576; and 28,552 live births occurred in hospitals and other health service establishments. Thus 80% of all live births reported in 1977 were attended by TBAs.

TBAs rarely advise mothers on contraceptive methods, largely because they are ignorant of them. Although family planning is a topic that is supposed to be discussed during the training course, in keeping with the current Ministry of Health policy on family planning it is not particularly emphasized during training.

Both trained and untrained TBAs are aware of the foods on which they should advise the mother; trained TBAs are better equipped to deal with the referral of patients in the event of nutritional problems, although only marginally better in this respect than the untrained TBAs. Trained TBAs still engage in delivery practices that represent a risk to the mother.

There is no clear-cut policy as to where responsibility lies for furnishing and maintaining the TBA’s supplies of equipment and material. Each region has its own policy, probably based on local conditions. The absence of travelling and subsistence allowances and of transport facilities and other resources were the most serious problems encountered at the outset of the programme.

No data are available yet on the impact of TBA training on maternal and child health.

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**CONCLUSION**

In order to improve the health of women and children in the rural areas of Honduras, living standards need to be raised. Without the availability of potable water, without an adequate system for disposing of excreta and waste, and without education, adequate food supplies or the availability of preventive health services, the training of TBAs is unlikely to make a major impact on the morbidity and mortality of women and children.

The Government is aware of the immense problems of the country’s rural inhabitants and has initiated programmes to increase essential services in the rural and isolated areas. But the achievement of progress depends on a
multiplicity of factors, one of the most important being the community's willingness to help change practices that have been used for generations.

Much has been written about the need for communities to initiate their own programmes, participate in their own health policy decision-making, and carry out their own activities; but they cannot do it alone. This appears to be especially true of TBA programmes, where the individuals involved are usually middle-aged and older women who have delivered babies for decades. Supervision, support, and follow-up of trained TBAs are essential and unfortunately the areas that are the weakest in many TBA programmes.

For the Honduran TBA training programme to achieve its stated objectives, many more supervisory personnel are needed than are now available. A serious effort also needs to be made to integrate the TBA training programme with other activities that will raise the community's standard of living so that babies no longer threatened by mortality from neonatal tetanus do not die later of some preventable disease.

REFERENCES
CHAPTER 3

PHILIPPINES:
THE DEVELOPMENT AND USE OF THE NATIONAL REGISTRY OF TRADITIONAL BIRTH ATTENDANTS

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INTRODUCTION

The Philippines is one of the largest archipelagos in the world, consisting of about 7100 islands covering a land area of 300,000 km². Eleven of the largest islands constitute 95% of the total area. Because of extensive earth movements (earthquakes, volcanic activity, etc.) mountain ranges dominate the islands and turn the lowlands into watersheds containing or surrounded by short and usually rapid rivers. About 65% of the country is thus either mountainous or constituted of isolated alluvial plains (9). These characteristics plainly make the delivery of health services difficult.

The majority of the population is of Malay stock, and in 1960 some 80% were Roman Catholic and 3% Protestant—a legacy of the over 400 years of Spanish and later American colonial rule. Of the remainder, about 5% were Muslim. Another legacy was language—in 1960 about 40% of the population could speak English. While English continues to be spoken by a considerable proportion of the population, Filipino (derived from Tagalog) has been widely accepted as the national language. None of the 75 languages of the Philippines, however, appears to be the mother tongue of more than a quarter of the population (9).

In the three decades after its independence in 1946, the Philippines made impressive gains in increasing educational opportunities (illiteracy was practically eliminated) and in economic development. Evidence suggests, however, that the distribution of income in the Philippines, which was already highly unequal prior to independence, has tended to become even more unequal since then. Particularly pronounced has been the declining share of income for the poor in the rural areas, where over two-thirds of the population live, where social services are poor, economic activity is limited, agricultural productivity is low, underemployment is high, and access to health services is frequently difficult (9). Since the early 1970s, the Government, aware of the shortcomings of past development policies, has been introducing economic reforms.
For administrative purposes, the Philippines is divided into 72 provinces, 61 chartered cities, and 1440 municipalities and municipal districts. The chartered city, unlike the municipality, is administratively independent of the province in which it is located and is linked, instead, directly to the national Government, as shown below:

![Diagram showing administrative structure]

Each municipality is composed of the town proper and about 20 or more barangays (formerly called barrios) surrounding the town. A barangay is a group of dwellings that may constitute a hamlet, village, suburb, or a segment of a district. In matters of administration, services, and the like, the town dominates the municipality, although in recent years members forming the secretariat of a barangay have been assuming greater responsibility for such matters as the settling of local disputes, the overseeing of rice distribution when supplies are low, and the organization of medical councils.

The very limited power of the local government in the area of taxation and financing has been one of the main obstacles to a more effective local involvement in development, including health development. Only a few services are undertaken locally; most are administered by the national Government through its field agencies. Since 1972, the national Government has attempted to provide local governments with more authority in the area of finance (9).

**REASONS WHY THE TBA TRAINING PROGRAMME WAS ESTABLISHED**

The training programme for TBAs was started by the Government in 1954 in an effort to narrow the gap between resources and needs as regards the health of mothers and children. The programme was based on the principle that the TBA—called the hilot in the Philippines—it given a little training and practical guidance could be safely entrusted with the care of expectant mothers and newly born infants in communities where professional midwifery personnel were not available.

The following subsections present, first of all, a broad profile of the thousands of TBAs practising in the country in the early 1970s; second,
some notions concerning the health status of women and children; and, third, information about health care policies and resources. All three factors were influential in the Government’s decision not only to start the TBA training programme in 1954 but to intensify it 20 years later.

Traditional birth attendants: a national survey

At the time the TBA training programme started, there was little systematicized information on the size of the pool of practising TBAs, their distribution, or their characteristics. The need for such an assessment became more apparent with the realization that, although the national economic development programme was being pursued, the resources generated were still insufficient to provide enough health personnel and services for an ever-increasing population. The extent of this insufficiency was underlined by the fact that more and more TBAs were being tapped for participation in local health programmes and that they would need to be taken into account in the projection of manpower requirements for the national health programme. With this in view, the Department of Health (now the Ministry of Health), with financial assistance from WHO, embarked in 1971–72 on a nationwide survey of TBAs.

The broad purpose of the survey was to obtain information that would be useful as a basis for modifying, intensifying, and systematizing the programme of TBA training that had started in 1954. The more immediate objectives of the survey were:

— to obtain information on the number and geographical distribution of practising TBAs and on their characteristics, such as age, sex, marital status, level of education, activity status, and source of training;
— to establish a register of TBAs at the local and central levels of health administration, as a means of identifying TBAs for the purpose of training and supervision.

Because the Philippines is one of the very few countries (and perhaps the first country) to have carried out a nationwide survey of TBAs, the methodology of the survey may be of interest to other countries as a form of guide. What follows, therefore, is a summary of the survey’s methodology and findings, full details of which may be found in the report of the above-mentioned study (12).

Organization of the survey

In 1971 an ad hoc committee was set up to review the state of indigenous midwifery in the country and to make proposals for the organization of a national survey of TBAs. On the recommendation of this committee, the Headquarters (HQ) Team was established. It was staffed, on a part-time basis, by a principal investigator (the Chief of the Division of Maternal and Child Health), an assistant investigator (the Nursing Programme Supervisor of the Division of Maternal and Child Health), and a
field coordinator (the Nursing Programme Supervisor of the Office of the Secretary (now Minister) of Health). The duties of the HQ Team were:

- to provide overall direction for the survey;
- to prepare the plan of work, including the schedule of activities;
- to ensure the procurement of supplies and equipment;
- to collect and organize the baseline data needed for the survey;
- to construct, pretest, and refine survey forms;
- to plan and conduct (or supervise) briefing sessions for collaborating field staff;
- to develop and distribute briefing materials;
- to establish a monitoring system for the survey.

Collaborating staff were selected from regional, provincial or city, and municipal levels of the health services. Regional nursing supervisors were designated to coordinate and supervise activities in their respective regions and nurses in the various provinces or cities were designated to coordinate and supervise activities in the municipalities under their jurisdiction. The data collectors were essentially local (municipal or city) health staff, mostly midwives.

**Survey procedures**

The following is an outline of the basic procedures involved in the survey.

*Estimates of the TBA population.* Before administrative arrangements could be made as described below, it was necessary to estimate the number and geographical distribution of the population to be surveyed. On the basis of consultations between the HQ Team and collaborating field staff, it was assumed that there was at least one TBA per barrio (now barangay) in each municipality or city. As there were 32,386 barrios at that time, it was assumed that there were at least that many TBAs. It was further assumed that this number would include most of the 9228 TBAs for whom the Ministry of Health had already provided training. In any case, both the trained and the untrained TBAs had to be contacted for the purposes of the survey.

*Collection of information needed for the conduct of the survey.* This involved the preparation of a list of trained TBAs and a list of organizational units of the national health administration. The list of trained TBAs was obtained from the Department of Health's files. The list of organizational units, which was obtained from a variety of sources, included information on the name and population size of each unit. The units spanned regional health units (of which there were 11 at the time), the provincial units in each region, the municipalities or cities in each province, and the barrios under the jurisdiction of each municipality or city.

*Preparation of data-gathering and data-aggregation forms.* The following forms were prepared:

- a 1-page questionnaire designed to obtain essential information about the TBA (Fig. 1);
Fig. 1. Questionnaire used in national survey of hilots (TBAs) in the Philippines.

<table>
<thead>
<tr>
<th>Bureau of Health and Medical Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROVINCE</strong></td>
</tr>
<tr>
<td>Province:</td>
</tr>
<tr>
<td>City:</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>Civil Status: Single</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>Date of Birth: _______ yrs.</td>
</tr>
<tr>
<td>1) <strong>Education</strong></td>
</tr>
<tr>
<td>Can read but not write</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>2) <strong>Schooling</strong></td>
</tr>
<tr>
<td>Grade 1-3</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>High School 3-4</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>College 4+</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>3) <strong>Previous Employment</strong></td>
</tr>
<tr>
<td>Department of Health/NURSE Training</td>
</tr>
<tr>
<td>Institute of Maternal and Child Health</td>
</tr>
<tr>
<td>Provinces/National Health Center Personnel</td>
</tr>
<tr>
<td>Kin (mother, grandmother, etc.)</td>
</tr>
<tr>
<td>Private Practice</td>
</tr>
<tr>
<td>Private Practice/Midwife</td>
</tr>
<tr>
<td>Missionary</td>
</tr>
<tr>
<td>Self</td>
</tr>
<tr>
<td>Others (specify)</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>4) <strong>Activity Status in 1978</strong></td>
</tr>
<tr>
<td>No practice at all</td>
</tr>
<tr>
<td>Partially practiced (1-11 months)</td>
</tr>
<tr>
<td>Fully practiced (all 12 months)</td>
</tr>
<tr>
<td>________</td>
</tr>
<tr>
<td>5) <strong>Number of Deliveries in 1978</strong></td>
</tr>
<tr>
<td>________</td>
</tr>
</tbody>
</table>

Signature of Data Collector: [Signature]
Designation: Nurse | Midwife |

Attested by: [Signature]

Signature of Hilots: [Signature]

Attested by: [Signature]

Number of Hilots: [Signature]

**Instructions**
- Items 1 and 2 - Check the appropriate box.
- Item 3 - State total number of years in province or the municipality and/or other municipalities.
- Item 4 - Check appropriate box.
- Item 5 - Check appropriate box.
- Item 6 - Count and state only the deliveries attended between January-December 1978. Do not count deliveries in the 1978 and deliveries in 1978 or previous years.

Identity of Hilots: If hilots are not listed in the data, include their signature in block provided for. If elicits, take blank.

Submit accomplished form to the city/provincial nurse supervisor.

Source: Reference 12.

- A form for assisting participating staff to monitor the distribution and retrieval of questionnaires;
- A form for helping field staff to trace the whereabouts and activity status of trained TBAs;
- A form used by individual data collectors to enter the results of their work in each barangay covered;
• a form used by individual provincial or city nurse coordinators for entering the names and addresses of data collectors in their area and the number of TBAs interviewed by each (used also as a reference list for the payment of honoraria to data collectors);
• a form used by individual regional nurse coordinators to report on the briefing sessions conducted by each for provincial or city nurse coordinators;
• a form used by individual provincial or city nurse coordinators to report on the briefing sessions conducted by each for data collectors;
• a form designed to show the list of practising TBAs who were not interviewed.

Preparation of form letters and telegrams. Letters were addressed to regional health directors and to provincial health officers concerning inter alia their responsibilities in the survey.

Preparation of information sheets. These included a set each for regional nurse coordinators, for provincial or city nurse coordinators, and for data collectors at the local level. In general, the sheets provided an explanation of the reasons for and the purposes of the survey and the various forms and techniques to be used in its conduct. Each set outlined the duties of the category of persons to whom it was addressed.

Briefing sessions. The HQ Team arranged for the orientation of regional and provincial or city health officers, the objective being to acquaint them with the usefulness of the survey and to obtain their administrative support. Thereafter, the 11 regional nurse coordinators were invited to Manila for a 2-day workshop focusing on the methodology for the survey, possible revisions in the TBA training programme in progress since 1954, and the manner in which the TBA registry would be established and used at local and national levels. The regional nurse coordinators then conducted workshops for the nurse coordinators in their area. Each of the latter, in turn, conducted a workshop for the local data collectors. The content of the workshops at each level varied with the nature of the work to be carried out by the participants.

Distribution of survey materials. Copies of the various survey materials were assembled by the HQ Team according to the types of material that would be needed at each level of survey management. Sets were placed in individual envelopes and distributed to participating field staff. Staff at the regional level received their sets at the end of the workshop in Manila; nurse coordinators and data collectors received theirs at the end of their respective workshops. Data collectors who were unable to attend the workshop were given their materials by the nurse coordinators in the course of regular field visits.

Guidance and supervision. Arrangements were made for the provision of guidance and supervision at different administrative levels. The HQ Team was responsible for overall supervision. Special arrangements for direct consultation between the HQ Team and the regional nurse coordinators helped resolve problems encountered in the field. Supervision at the field
level was facilitated by the fact that the nurse coordinator’s responsibilities concerning the survey were made an integral part of her normal functions, which already included field visits and other forms of consultation with field staff.

Monitoring. The survey was monitored essentially through the normal channels of communication established within the Department of Health. An added facility was the authorization given for the more frequent transmission of messages by telephone and telegraph and the use of more rapid means of transport, including the hiring of boats or horses to expedite the flow of information from remote areas.

Time frame. The survey was originally scheduled as a 2-month study (1 October–30 November 1973), but unforeseen weather, communication, and transport difficulties caused delay in the collection and transmission of information from certain areas. It was therefore decided to move the cut-off date for data reception to June 1974.

Data processing. This task was undertaken by the HQ Team and comprised the usual procedures of listing, counting, coding, cross-checking, verifying, etc. As a part of this process, the forms providing aggregate data were checked against the individual forms completed for and signed by each TBA.

On the basis of the data recorded in the questionnaire completed for each TBA interviewed, it was possible to develop a register of TBAs. For this purpose, 2 identical, small printed cards were prepared for each TBA (see Fig. 2). The relevant information from the individual questionnaires was transferred to both of the registry cards. One card was then filed in the health unit of the municipality or the city governing the area where the TBA resided. The sum of these cards constituted the local register of TBAs. The second card for each TBA was sent to the Division of Maternal and Child Health. The sum of the cards from all localities constituted the national register. These registers, which serve to locate TBAs for purposes of training and supervision, need to be updated to reflect any changes occurring with respect to individual TBAs (e.g., changes in address, status of practice, status of training), and new cards need to be added for new TBAs located.

Findings of the survey

On the basis of information gathered in the survey, it was estimated that in 1974 there were between 38,000 and 40,000 TBAs in the Philippines. This number suggested an average of at least one TBA per barrio, there being a total of 52,386 barrios in the country at the time. Since each barrio contains, on average, 1000 inhabitants, this would mean that there was at least one TBA per 1000 inhabitants or at least one for about 200 women of childbearing age (15–44 years).

From the survey, information was obtained on a total of 31,122 TBAs. However, not all information called for by the questionnaire was available

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**Fig. 2.** Front and back of a form used for the registration of TBAs in the Philippines.

### Registry Card

*Department of Health*
*Bureau of Health and Medical Services*
*Division of Maternal & Child Health*
*Manila, Philippines*

**REGISTRY CARD**
*Traditional Birth Attendant (Hilot)*

<table>
<thead>
<tr>
<th>Province</th>
<th>Municipality/City</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name (Family)</th>
<th>(First)</th>
<th>(Middle)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Civil Status:</th>
<th>S</th>
<th>M</th>
<th>F</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex:</th>
<th>Male</th>
<th>Female</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training:</th>
<th>Kin</th>
<th>Private Physician</th>
<th>Missionary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Private Nurse/Midwife</th>
<th>Self</th>
<th>Others</th>
<th>Specify</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(Front)*

1. **Literacy**
   - Cannot read or write
   - Can read, cannot write
   - Can read and write
   - Can write name only

2. **Schooling**
   - None at all
   - Grade 1-3
   - Grade 4-6/7
   - High School 1-2
   - High School 3-4
   - College 1-3
   - College 4 to 6

3. **Years in practice**

4. **Activity status in 1972**
   - No practice at all
   - Partially practiced (1-11 months)
   - Fully practiced (all 12 months)

5. **Number of deliveries in 1972**

*(Back)*

*Source: reference 12.*
for each TBA. The following tabulation shows the number of TBAs on which information was available with respect to each characteristic:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of TBAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence</td>
<td>30 798</td>
</tr>
<tr>
<td>Sex</td>
<td>30 893</td>
</tr>
<tr>
<td>Civil status</td>
<td>29 518</td>
</tr>
<tr>
<td>Age</td>
<td>29 064</td>
</tr>
<tr>
<td>Literacy level</td>
<td>29 679</td>
</tr>
<tr>
<td>Schooling</td>
<td>29 464</td>
</tr>
<tr>
<td>Length of practice</td>
<td>29 160</td>
</tr>
<tr>
<td>Activity status</td>
<td>29 287</td>
</tr>
<tr>
<td>Births attended</td>
<td>29 024</td>
</tr>
<tr>
<td>Training received</td>
<td>29 754</td>
</tr>
</tbody>
</table>

Nearly 92% of the TBAs were found to be living in rural areas and about 8% in urban areas. By way of comparison, the distribution of the total population was about 70% rural and 30% urban.

Most TBAs (81%) were 40–69 years old. Of those within this age group, nearly a third were in their fifties, slightly over a fourth in their sixties, and a fifth in their forties. These findings confirm the general impression that practising TBAs are likely to be middle-aged or older. At these periods of life the childrearing and housekeeping tasks of most TBAs have diminished, thus allowing them more time for attending mothers at childbirth and assisting in the care of the newborn.

The majority of TBAs (84%) were found to be women. Although only 16% were men, the survey showed that there were male TBAs practising in all 11 regions of the Philippines, the proportion in each region ranging from 6% to 35%. In a few parts of the country they outnumbered the female TBAs. It was observed that, in many areas, the male TBAs were also herbalists.

Almost all of the TBAs (nearly 99%) had married. Of the married TBAs, nearly 75% were living with their spouse, nearly 25% were widowed, and a few (1.5%) were separated from their spouse.

The proportion of TBAs who were literate (i.e., who could read and write or read but not write) was nearly 57%. By way of comparison, the literacy rate in the general population 10 years or older is about 83% (22).

Nearly two-thirds of the TBAs had attended school. Of these, about 50% had had 1–3 years of schooling, about 43% had had 4–7 years, about 6% had had 1–4 years of secondary education, and a few had had 1 or more years of college education. It is noteworthy that, among the TBAs as a whole, the proportion who had attended school was greater than the proportion of literate TBAs. This would suggest that some of those who had received only a very few years of schooling had lapsed into illiteracy—a tendency which is not uncommon in the world, particularly among rural populations.

The survey found that there was considerable variation in the number of births attended annually by individual TBAs. In 1972, the following numbers
of births were attended by the following proportions of TBAs: none by 3%, 1–4 by 17%, 5–9 by 22%, 10–14 by 19%, 15–19 by 10%, 20–24 by 10%, 25–29 by 3%, and 30 or more by 16%. These findings indicate that birth attendance is not a full-time activity for TBAs generally, since attendance at even 30 births a year would average only 2.5 births a month.

Nearly 70% of the TBAs had learned the practice of midwifery either from relatives or neighbours or by self-learning. Within this group, over a third were self-taught, over half had been taught by relatives, and the remainder by other members of the community. About 19% of the TBAs had received training under the programme initiated in 1954 by the Department of Health.

The majority (70%) of the TBAs can be considered as veterans in birth attendance in that they had practised for at least 10 years. Of these, nearly a fourth had 30 or more years of experience and nearly two-thirds had 20 or more years.

The survey was limited to obtaining information on only the variables noted above. A few small-scale studies have focused on other characteristics of TBAs and their manner of practice. Among these are studies of the TBA in metropolitan Cebu (3), in Bay Laguna (7), in Mariduque (2), and in Oriental Mindoro (8).

Aspects of TBA practice

The TBA’s activities consist mainly of providing advice to pregnant women, managing deliveries, attending to the newborn, and providing postnatal care. TBAs have nothing to do with circumcision—which is not practised on females in the Philippines and which, in the case of males, is usually performed at the hospital, either soon after birth or during adolescence.

There have been no studies that indicate how many maternal and infants’ deaths result from the manner in which TBAs practise. Health professionals familiar with the work of TBAs feel, however, that certain practices generally are dangerous to the point where they could lead to the death of a mother or an infant. In the case of the mother, such practices include: abdominal massage to position the fetus; forceful manipulation of the abdomen during labour, which may cause rupture of the uterus; application of force to expel the placenta, which may result in haemorrhage; failure to sterilize instruments and to have clean hands; and failure to make timely referral of high-risk patients. In the case of the baby, the biggest risk is neonatal tetanus, which can result from the TBA’s failure to cut the cord with a sterile instrument and to dress it with clean materials. An unpublished report1 of a study of infants with neonatal tetanus admitted to a national hospital blamed TBAs for such cases.

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1 Bondan, T. Cases and deaths from tetanus among infants at the San Lazaro Hospital. (Unpublished report prepared for the Ministry of Health, Disease Intelligence Center, Manila, 1977).
Abortion is prohibited by law. Some TBAs do, however, give advice on how to prevent pregnancy and how to induce abortion. The concept and techniques of family planning are only slowly becoming known to TBAs. In a study of 1157 women in Bohol Province (24), it was found that for only a very few of them was the TBA the source of information on family planning. Such information was mostly given by rural health unit personnel.

Since the Government's adoption of a policy for the promotion of family planning, voluntary and Government agencies have explored the use of TBAs as agents for the recruitment of family planning acceptors and for the resupply of contraceptives. No large-scale assessment has yet been made of their performance in these respects. However, a study of 482 TBAs in the provinces of Camarines Norte, Oriental Mindoro, and Marinduque provides insights into the problems and prospects of involving TBAs in the national family planning programme. It was found, for example, that, although TBAs recruit fewer acceptors than do clinic personnel, they reach areas that the latter seldom or never visit (7).

**Health status of women and children**

When training programmes for TBAs were initiated in 1954, the infant mortality rate was about 100 per 1000 live births and the maternal mortality rate was about 3.8 per 1000 live births. The increasing number of trained TBAs, combined with other factors, helped to reduce these rates and bring about a general improvement in the health status of women and children (although present trends are not so encouraging—see page 48). The data below, which were obtained from the Ministry of Health (17), reflect the situation in 1974, i.e., 20 years after the initiation of training programmes for TBAs.

**Infant mortality**

The total of registered live births in 1974 was 1,081,073. Infant deaths (i.e., deaths of infants under 1 year of age) totalled 63,491 and constituted about 22% of all deaths. The rate was 58.7 per 1000 live births.

Infant mortality can be broken down into postneonatal, neonatal, and early neonatal deaths of infants aged, respectively, 28 days—1 year, under 28 days, and under 7 days. The number of postneonatal deaths was 32,616, representing a rate of 30.2 per 1000 live births. Neonatal deaths totalled 31,033, for a rate of 29.6 per 1000 live births. There were 21,426 early neonatal deaths (19.8 per 1000 live births). Early neonatal deaths are included in the 34,183 perinatal deaths, of which 12,757 were late fetal deaths. Thus, perinatal deaths constituted about 3% of all live births and late fetal deaths combined (31.3 per 1000 live births and late fetal deaths combined).

The principal causes of infant deaths were: pneumonia (26%), gastroenteritis and colitis (nearly 9%), anoxic and hypoxic conditions (over 7%), and avitaminosis and other nutritional deficiencies (about 6%).

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Mortality among children aged 1–4 years

In 1974, children aged 1–4 numbered 5,463,000 and represented over 13% of the total population. The number of deaths among them was 40,740, representing about 14% of all deaths and a rate of about 7.5 deaths per 1000 children in this age group.

The principal causes of death in this age group were: pneumonia (nearly 38%), enteritis and other diarrhoeal diseases (13%), avitaminosis and other nutritional deficiencies (7%), symptoms and other ill-defined conditions of early childhood (nearly 7%), measles (nearly 6%), and bronchitis, emphysema, and asthma (over 5%).

Mortality among women aged 15–44

In 1974, women aged 15–44 numbered over 9 million and represented nearly 22% of the total population. The number of deaths among them was 17,873, which represented about 6% of all deaths and a rate of nearly 2 deaths per 1000 women in this age group.

Maternal mortality

In 1974, there were 1690 deaths of women from causes associated with childbearing for a rate of 1.6 deaths per 1000 live births. There were 140 reported deaths resulting from abortion; this number represented about 8% of maternal deaths. The other causes of maternal deaths were: haemorrhage of pregnancy and childbirth (55%), toxaemia of pregnancy and the puerperium (19%), and other complications of pregnancy, childbirth, and the puerperium, including unspecified complications (e.g., puerperal infection) associated with delivery (12%).

Trends in mortality rates

After a rather dramatic decline between the years 1946 and 1970, death rates appear to be rising if data from the early 1970s can be used as an indicator. For example, the crude death rate rose to an estimated 10.6 in 1976 (13) after a decline from 15.1 in 1946 to 6.7 in 1970 (16). The maternal death rate rose to 1.6 in 1974 (17) after dropping from 4.2 in 1947 to 1.3 in 1971 (16). The infant mortality rate was 59.3 in 1970, down from 125.5 in 1946 (16), but rose again to an estimated 74 in 1976 (13). Similarly, the fetal death rate, which was 12 in 1958 (the first year for which data in this regard became available), dropped to 7.3 in 1970 only to rise again to 14 by 1972 (16).

MCH care: policies and resources

The Government's concern for the health and welfare of mothers and children is evident in the public declarations of the highest political and
health authorities, in legislation, in budgetary allocations, in the health care programmes being planned or implemented. What follows is a discussion of some of the elements that have a bearing on the quantity and quality of MCH care in the Philippines and that point to the need for having trained TBAs to help make safe health care available to still more women and children.

Financial resources

In 1978 the budget for health care, including MCH care, ranked fourth in the Government’s order of budgetary priorities, even though it constituted only 4% of the total Government budget. This is, however, only a part of the total health expenditure in the Philippines, since it includes neither local government health budgets nor health expenditure in the private sector, which, according to reliable estimates, is about equal to the national Government’s expenditure.

Neither the national nor the local health budgets contain specific provisions for MCH care, which is essentially an integral part of overall health care; health facilities and personnel thus generally have multipurpose functions. Therefore, while it is possible to identify the Division of Maternal and Child Care in the national budget, no provisions are indicated for specific MCH activities such as the development of facilities or the training of personnel, since such items are usually merged with relevant activities of other units of the Ministry, e.g., the Bureau of Health Services and the Office of Health Education and Personnel Training. As for the training and supervision of TBAs, this is normally done by members of the local health unit as part of their regular duties, so that no additional cost is involved.

MCH facilities

There appears to be a consensus among field workers that more than 80% of the health services delivered in the Philippines go to mothers and children. However, coverage of this population group is far from complete: only two-thirds of even the total population is covered—one-third by the private sector and one-third by the government sector.

There are at present 1700 rural health units throughout the country, each unit catering to 20 000–50 000 people within a radius of 3.5 km. Each health unit is staffed according to the funds available, consideration also being given to population density in the surrounding area. Under normal conditions, the health team in each unit would consist of at least a physician, a nurse, a midwife, and a sanitary inspector. However, the distribution of health personnel is very uneven. Despite improvements in recent years, at the end of 1972 posts were vacant for 23% of the physicians and 46% of the nurses needed to staff the existing rural health units (9). Additionally, many of the units at the time lacked electricity and a potable water supply, and more than 90% had inadequate clinical equipment.
On the periphery of the various rural health units are sets of barangay health stations. Each station, which is expected to serve a population of about 5000, is staffed by a licensed midwife who acts as a multipurpose health worker. The development of the stations was started in 1976 with the help of a loan from the World Bank. At present there are over 6000 midwives staffing the stations, or an average of 1 midwife for over 5000 rural inhabitants. While this ratio is a great improvement over previous ones, it is indicative of the great need that still exists for MCH personnel in the rural areas.

Additional facilities for health care include: the 25-bed emergency hospitals, so located as to be able to accommodate referrals from the rural health units; the provincial hospitals, located in the respective provincial capitais; the regional hospitals, each located in the principal municipality of the region concerned; and the strategically placed medical centres. The regional hospitals and medical centres are used for specialized diagnostic and therapeutic care which cannot be offered at other levels.

**Utilization of health facilities**

Various factors tend to hinder the full utilization of the limited services available. One of these is that certain populations live very far from health facilities, a factor which is aggravated by inadequate means of transport and the unfavourable climatic conditions mentioned earlier. Social factors also play an important role. In remote areas, people tend to be shy about consulting health personnel whom they view as belonging to a higher social level. Religion is another factor, particularly with respect to family planning services. Insufficient knowledge about the health facilities that are available is yet another obstacle to utilization. Perhaps the most important factor, and one underlying most of the others, is economic. According to a report of the Cabinet Committee on the Development Plan for 1978–82 (13), the income of most of the population in 1976 was not enough to raise the people above the poverty level. In general, the fear that one might have to pay for the cost of medical consultation and medicines is an important deterrent to the utilization of health services by the poor in both urban and rural areas. Many patients hesitate to come even to the clinics run by the public sector, where consultations are free of charge but medicines are not usually available, because they would be unable to pay for any drugs prescribed.

**Community participation in health care**

At present there are over 100 local projects on primary health care, some sponsored by private groups, others by religious groups, and others by local governments. In these projects, local people are selected by the community and trained for primary health care duties, which they usually perform on a voluntary and part-time basis. Barangay pharmacies have been established as cooperatives under local funding. Of the proceeds from these pharmacies, part is used to expand and replenish the pharmacies and part is devoted to
local health purposes as decided by the community. Health education is an important component of the local projects and is directed at making the community aware of its health needs and teaching it to assume responsibility for promoting health among its members. Furthermore, the role of health is emphasized in local programmes for community development.¹

**Birth and death registration**

Under the civil registry law, all births and deaths must be registered with the local civil registrar, who is the municipal treasurer in the case of municipalities and the city health officer in the case of most chartered cities. Births are to be reported by the individual conducting the delivery or by the parents. Deaths are to be reported by the person attending the patient at the time of death or by the family. A fetus born dead is required to be registered in a certificate of fetal death. A fetus of 7 months or more which is born alive but dies shortly afterwards is registered first as a birth and then as a death.

Neither a birth nor a death registration requires the payment of a fee. However, some local governments levy a fee for the certification of such events. This practice often serves as a deterrent to registration. Ignorance of the law is another cause of underregistration. It is known that there is a general underreporting of both births and deaths. A study in one province in 1956 found the underregistration of births to be more than 30% and that of deaths to be more than 10%. A more extensive survey in 1961–62 found that about 27% of deaths were not reported (16).

**Family planning**

In 1975, the population of the Philippines was about 42.5 million, the rate of population growth being about 2.7% a year. While there are indications that the fertility rate has begun to decline, even the most optimistic projection puts annual population growth at more than 2% at least until the 1990s. Unless strong measures are taken to counter this trend, the population could well be in the vicinity of 80 million by the 1990s, or nearly double the number in 1975. The social and economic costs of absorbing such an addition to the population would be enormous. Thus, one of the Philippines' major tasks would appear to be that of intensifying efforts to reduce the rate of population growth as rapidly as possible (9).

Although two family planning associations were founded in the Philippines in the early 1960s, the Government's programme in family planning started only in 1970. Its target at the time was to reduce the rate of population growth to 2.4% by 1977. In 1975, about 40 governmental and

private agencies were active in the programme, providing services at over 2700 clinics and gaining over 700,000 new acceptors that year. The sale of condoms and oral contraceptives through commercial channels has been authorized since 1975. In 1969 the anti-contraceptive law was liberalized, and in 1973 restrictions on pronatalist social measures were introduced (10).

There is no law prohibiting the use of any particular contraceptive. Nurses and midwives, after adequate training, may have access to and distribute the various types of contraceptives in common use. New types of contraceptives or those still under study may be prescribed only by physicians. There is no restriction on the purchase or distribution of condoms. As regards oral contraceptives ("the pill"), even TBAs, after training and under supervision, are permitted to act as resupply agents. The practice of voluntary abortion as a family planning method is not sanctioned by law.

There is a positive relationship between MCH care and family planning services in the Philippines. This is implicit in the fact that the Ministry of Health has an official seat in the governing body of the Population Commission, which was set up by a special decree in 1971 to coordinate family planning activities. The relationship is further implicit in the fact that the National Family Planning Office was created within the Ministry of Health. While the office now operates as a separate unit in the Ministry, coordinating its activities with those of the Division of Maternal and Child Health, it is envisaged that responsibility for MCH and family planning will be merged under one unit of the Ministry of Health once family planning services become stabilized as an integral part of health services. An important project in which means for the integration of family planning with MCH care are being developed and tested is the internationally assisted MCH-based Family Planning Project in Bohol Province.

THE TRAINING PROGRAMME FOR TBAs

In the discussion that follows a brief account is first given of the evolution of interest in and support for the development of a training programme for TBAs. This is followed by a description of the training programme proper.

Evolution of support: political, financial, technical

In 1954 the Ministry of Health carried out a national fact-finding survey which revealed the extent and gravity of the health problems of mothers and children. Despite these findings, opinion was divided among health authorities and professional health workers over whether TBAs should be encouraged to practise under some form of supervision by Government health staff. Those who objected based their opposition on existing laws

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which prohibited the practice of medicine, nursing, and midwifery by people other than those officially recognized as qualified to do so. As will be seen below, however, the objection were largely overcome.

The first step in the training of TBAs was taken under the aegis of the Bureau of Hospitals, which contained an MCH section that exercised supervision over all day-care centres run by local women’s groups. Within this section, a team consisting of a WHO nurse-educator and a national nurse-supervisor formulated a plan to improve midwifery training. The plan included proposals for the training and utilization of TBAs. With the approval of the Director of the Bureau of Hospitals, other national nurse-supervisors, as well as teaching staff in midwifery schools, were briefed on the plan, including the proposed programme for TBAs.

The TBA programme was then initiated by the above-mentioned team on a pilot basis in one province of the Philippines. As a part of the project, the team trained a group of provincial public health nurses to be the initiators and leaders of TBA training in their respective areas. With the regionalization of health services after 1958, steps were taken to train regional nurse-supervisors to organize and provide training for provincial or city nurse-supervisors so that the latter could start TBA training programmes using public health nurses and midwives at the local level as their understudies. As the programme expanded and the provincial nurse-supervisors became more occupied with supervision, the public health nurses and midwives gradually assumed the task of training TBAs. Much later, with the production of more midwives and their assignment to barangay health stations, these midwives were assigned the task of training TBAs, under the supervision of the public health nurse (see also page 56).

When the training programme for TBAs was initiated, it was funded only by the Ministry of Health (apart from the WHO funding implicit in the involvement of the WHO nurse-educator mentioned above). Not long thereafter, however, UNICEF provided substantial material support in the form of stipends for trainees, audiovisual aids, means of transport and equipment and supplies, notably the midwifery kit and its contents. Since 1975, no stipends have been given; instead, UNICEF has been providing honoraria for the teachers and supervisors of TBAs. The kits continue to be provided, but replenishment of their contents depends on the stock of instruments and supplies available in the local health units. WHO has continued to give technical support through its nursing and midwifery staff. With the support of UNICEF and WHO, it was possible to expand to other places what started out as a pilot programme in one province. For the past few years the Ministry of Health has been the main source of funding for the programme. Funding is indirect in the sense that the cost of training the trainers of TBAs is covered by funds allocated for the training of health personnel generally, while the training of TBAs becomes part of the regular duties of personnel thus trained.

While the above programme is essentially Government sponsored, the
private sector has also engaged to some extent in training TBAs. For example:

- In 1969 the University of the Philippines, as part of its Comprehensive Community Health Programme (CCHP), sponsored the training of 35 TBAs in Bay, Laguna and 18 in the town of Victoria—one result of this project being the preparation, by the CCHP's Committee on Pilot Training, of a Midwife (hilal) training manual.

- During the period 1971–74, the Institute of Maternal and Child Health, with assistance from the Rockefeller Foundation, conducted a training programme which included family planning in 3 provinces (Marinduque, Camarines Norte, and Mindoro Oriental); 482 TBAs were trained under this scheme.

- In 1974 the University of the Philippines and the Silliman University Medical Center, with assistance from UNESCO and UNFPA, enabled 3 courses to be given in the province of Negros Oriental in which a total of 56 TBAs were trained in MCH and family planning.

Recently, other national bodies have shown an interest in training TBAs to engage in activities either additional to or other than birth attendance, e.g., in family planning, primary health care, and nutrition. Offers of support for the expansion of TBA training to these fields have been received from both national and external agencies. The Ministry of Human Settlements, for example, has offered assistance for the preparation, in local dialects, of manuals to be used in the training of TBAs and by TBAs in their practice. It has also offered to help produce materials on nutrition that can be distributed by, among others, TBAs. UNFPA has provided considerable support for projects involving research on TBAs and TBA training.

So far as the Government's TBA programme is concerned, nursing and midwifery personnel are the ones most closely involved in the planning and conduct of TBA training. The Division of Maternal and Child Health contributes to the planning and provides other technical inputs. The operational and supervisory components are handled by nurses at the regional, provincial, and local levels. The actual teaching, as mentioned above, is now done mainly by rural midwives.

While there is no specially organized form of community support for the TBA programme of training and utilization, individuals do help. For example, the barangay captain or a mother attending a mothers' class may help to inform TBAs about the training programme and encourage them to participate in it. Moreover, community members often participate in ensuring the transport of patients to referral centres.

The TBAs have no direct role in planning the course, although feedback from them during the process of supervision (described farther on) may eventually influence the content, methods and other aspects of the course.

Decisions concerning the broad areas of health work the trained TBAs will be allowed to undertake, and hence the broad subject matter of the training programme, are made basically at the central level and within the limits imposed by law with respect to the practice of medicine, nursing, and
midwifery. These decisions are made by the Minister of Health on the basis of recommendations put forth by his technical staff, including those in the Division of Maternal and Child Health. Decisions concerning the medicaments and supplies the TBAs will be allowed to use in their health work are arrived at in the same manner. Within the framework of the Minister's directive, however, certain adaptations may be made at regional or provincial level. For example, according to a report on the Bohol Province Maternal and Child Health-Based Family Planning Project (19), the kits issued to TBAs in the project area contained not scissors, which require sterilization before use in a delivery, but a set of razor blades. The intention was that the TBA would use a new blade for each delivery and bury it afterwards with the placenta, thus avoiding the risk of using an unclean instrument and causing infection. According to an earlier report on the same project (18), because over two-thirds of the reported maternal deaths in the project area in 1977 were found to be due to haemorrhage, a decision was made to allow the local TBAs to administer an oral ergot preparation to bleeding patients. According to that report, most of the deliveries during which haemorrhage occurs take place far from a midwife, a nurse, or a physician.

While decisions allowing the training and utilization of TBAs for work in the areas of prenatal care, delivery, and care of the newborn are made by national personnel based on their observations of need in these respects, the involvement of TBAs in birth reporting, family planning, nutrition, and other aspects of primary health care has been largely shaped by external influences.

As mentioned earlier, initially there were differing opinions among health authorities over whether training programmes for TBAs should be developed. This problem has been essentially resolved thanks to:

- the Ministry's repeal of regulations that restricted midwifery practice to health professionals only;
- the definition of the terms of reference of the trained TBA and her relationship with the organized health system;
- the considerable support provided by WHO and UNICEF to TBA practice under professional supervision;
- the favourable results noted from the practice of trained TBAs, which led to the midwifery law being amended so that TBAs may have a limited practice according to specific terms of reference.

Teaching/learning objectives

The teaching/learning objectives of the training programme for TBAs are subject to approval at the central level. They are based on discussions among a multidisciplinary group of technical staff (physicians, nurses, and midwives) at that level as well as on feedback from personnel in the field and on studies of various sorts, including socio-anthropological studies. A number of such studies have been carried out in connexion with the
previously mentioned project in Bohol Province (4). Further important information was obtained from studies in Marinduque, Camarines Norte, and Oriental Mindoro which formed part of a TBA project initiated by the Institute of Maternal and Child Health. (For reports of these studies see references 2, 7, 8, 11.) Thus, the information base upon which learning objectives are founded is substantial.

The trainers of TBAs

The two persons most directly involved in the training of TBAs are the nurse and the midwife who work in the community. In most cases, it is the midwife who actually conducts the training course, with the public health nurse lending the necessary support as well as assuming general responsibility for the municipal programme.

There is no formal programme for the training of trainers. Rather, their training is an on-going process beginning with at least one day of orientation before they assume their duties as trainers of TBAs. This and any subsequent orientation they receive form part of the in-service training they periodically receive by one means or another, e.g., through monthly staff meetings conducted by provincial or city nurse-supervisors, at which the problems encountered by the trainers and the possible solutions are discussed, and through field visits paid them by provincial or city nurse-supervisors. The latter are the trainers and supervisors of the trainers of TBAs, who will have received their orientation for this task from the regional nurse-supervisors. The regional nurse-supervisors in turn obtain their orientation from staff of the Division of Maternal and Child Health, either when such staff visit the regions or when the regional nurse-supervisors visit the Division for consultation on MCH matters.

The trainees

When the programme was started in 1954, only TBAs aged 40–60 were considered. The training of young TBAs was discouraged because the Government did not want them to make a career out of their practice of midwifery, viewing the TBA programme as a stop-gap measure that would not need to be pursued for very long. This did not turn out to be the case, however, since the shortage of qualified midwives in remote and hard-to-reach areas persisted. Thus, in 1975 the TBA programme was intensified and recruitment broadened to include practising TBAs of all ages. Priority is given, however, to those in rural areas where professional health workers are not available. TBAs living in urban areas, where health services are readily available from either the governmental or the private sector, are not encouraged to participate in the training programme. It is felt that the available training resources would be more beneficially spent on rural TBAs; moreover, the possible competition arising between trained urban TBAs and professional practitioners would be unwelcome. Excluded also
are the TBAs who received training prior to 1975, i.e., about a fourth of the total number of TBAs located through the inventory.

In general, TBAs welcome training under the Government's programme. Only a small number have declined the offer, for reasons generally associated with their economic situation. For example, some who lived far from the place of training could not afford the cost of travel or of subsistence during the training period. Such TBAs are now exceptionally given allowances to cover these costs. In some cases, TBAs declined because their household chores or seasonal tasks, such as the planting and harvesting of crops, did not allow them time for training. Efforts have been made to overcome these difficulties by scheduling the courses more appropriately or by particular arrangements made by the midwife with the TBAs concerned. Perhaps most serious, some TBAs have declined the offer of training because of their fear that local health professionals will accuse them of illegal practice. This fear persists in areas where health staff, particularly the medical officer, is known (or thought) to be unsympathetic to the TBA programme. Efforts are being made to deal with this problem through public information.

Course content and methods

The Government's training programme for TBAs covers only the traditional services provided by the TBA, i.e., care of the mother during pregnancy, especially during the second and third trimesters, delivery, care of the newborn, and care during the postnatal period (which usually ends when the umbilical cord drops off). Family planning has, however, been incorporated into the current programme. Organizations interested in having TBAs undertake additional or other activities are responsible for providing the relevant training.

Currently the Government’s training course consists of 10 sessions, each lasting at least 4 hours, the content being as follows:

*Session 1—Orientation.* Discussion centres on the purpose of the training, the number of women in the community who are likely to seek the TBA's services, common harmful practices of TBAs, and the advantages of a positive working relationship between the TBA and local health service personnel.

*Session 2—Infections.* Discussion centres on the concept of harmful organisms—how they relate to certain illnesses of mothers and children, how they originate, and how their development may be prevented by the TBA and the mother; the stress being on the basic principles of clean hands, clean supplies, and clean utensils.

*Session 3—Delivery kit.* The kits are presented to the TBAs, and the trainers explain and demonstrate the use of each item in the kit and provide instruction on how to maintain the kit and its contents in a state of cleanliness and how to sterilize the instruments in preparation for their use. The kit is intended for use by the TBA throughout the time she is active as a
birth attendant. Upon her death, the kit is usually passed on to a relative, who then becomes eligible for training.

Session 4—Care during pregnancy. Discussion centres on the concept of prenatal care and the reasons why it is important, the normal changes that occur in the pregnant woman and their significance, how to relieve certain minor discomforts of pregnancy, the signs and symptoms that suggest abnormalities requiring the patient's referral to more highly skilled personnel, and the recognition of high-risk pregnancies and the need for patient referral.

Session 5—Care during labour. Discussion centres on the TBAs' traditional beliefs and practices with respect to pregnancy, labour, and delivery, the rationale underlying them, and the danger inherent in some of them. The techniques of safe assistance during labour and delivery are discussed and demonstrated. Instruction is also provided on signs and symptoms that suggest the need for referral to more highly skilled personnel.

Session 6—Care of the newborn. The TBAs learn how to stimulate respiration, to cut and dress the cord, to identify signs and symptoms indicating the need for referral, and general principles of early infant care, including breastfeeding. Traditional beliefs and practices concerning the newborn, particularly those related to cord management, are discussed, and the danger inherent in certain practices is pointed out. General infant care is not taught, since this function is assumed by the local health services through its clinics and mothers' classes.

Session 7—Postnatal care. Discussion centres on the normal puerperium, the signs and symptoms that indicate the need for patient referral, the importance and methods of breastfeeding, the danger inherent in improper methods of bottle-feeding, the importance of the new mother's personal hygiene and proper nutrition. As in other sessions, traditional beliefs and practices are discussed and attempts made to point out those that are likely to be harmful.

Session 8—Birth registration. Each TBA is provided with a booklet in which to record data on births and given instructions and demonstrations on how to record the data. Illiterate TBAs are encouraged to seek the help of literate persons in keeping their record up to date.

Session 9—Family planning. Discussion centres on the implications of frequent pregnancies and large families for the health and welfare of the family as a whole, on selected methods of contraception, and on the role of the TBA in recruiting family planning acceptors, resupplying certain contraceptives, and motivating discontinuers to resume family planning. The TBAs' views on family planning as such and on their willingness to act as family planning agents are solicited.

Session 10—Summary and follow-up. The trainees are encouraged to express their opinion of the course, what they feel they have learned, to what extent they expect their mode of practice to change as a result of the course, etc. During this session, arrangements are also made for the monthly supervision of the TBAs (discussed later in this chapter).
The methods used during the training course are lectures, group discussion, demonstration and return demonstration, role-playing, and group work. Materials used include models of a pelvis and a baby, flipcharts, flannelgraphs, and the midwifery kit. The Hilot teaching guide (14), prepared and periodically revised by the Division of Maternal and Child Health in consultation with field staff, is used for the training of TBAs and as a reference in the orientation of the trainers and supervisors. This guide, which has been updated to include content on family planning, has helped to standardize the content of TBA training on a national scale. As an additional aid in teaching/learning, the Division of Maternal and Child Health has produced a brochure entitled The good hilot helps the mother in her barrio (20). The brochure, which contains simple guidelines and drawings, can be used both during the training course and by the TBA in her practice.

Other aspects of the training course

As noted above, the course consists of 10 sessions each lasting at least 4 hours. Generally the sessions are spread over a 10-day period, with a session per day. When necessary, the duration of the course can be shortened to 8 days by combining certain sessions. Generally, the sessions are conducted on consecutive days. When the needs of the trainees demand otherwise, however, the course is spread over several weeks, with one or more sessions per week.

The courses are usually held in the rural health centres or the barangay health stations. The number of trainees in each class is generally limited to 10, and in some cases there may be as few as 5. In the past, all trainees were given allowances to cover the cost of their transport to and from the training site as well as their board and lodging. Since 1975, as mentioned earlier, these allowances have been disallowed except for TBAs who have to travel long distances. The other trainees pay for their travel as well as for board and lodging in private homes near the training site. As the withdrawal of allowances has hardly lessened the interest of TBAs in receiving training, it may be said that financial incentives do not appear to play a role in their desire for training. What may be more important is the midwifery kit provided by UNICEF—a means by which the TBA can show the community that she has undergone training and received the Government’s permission to practise midwifery.

Training statistics

In this chapter, a trained TBA is considered to be one who has received training from a professional health worker. It is estimated that in 1978 there were about 19,550 trained TBAs practising in the Philippines. Included in this total are 9,056 TBAs who were reported in the national survey (12) as having been trained during the period 1954–74. The remaining 10,500 were
trained during the period 1975–78. Assuming that there are about 40 000 TBA
assemblies altogether practising in the country, i.e., one TBA for every
city, the trained TBAs would now constitute about 50% of the total, as opposed to about 30% in 1973–74.

At the present time, a breakdown of the sources of TBA training can be
provided for only the 9056 trained TBAs reported in the national survey. Those sources and the number of TBAs trained by each are as follows:

<table>
<thead>
<tr>
<th>Source</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Health programme</td>
<td>5649</td>
</tr>
<tr>
<td>Medical missions (religious)</td>
<td>1517</td>
</tr>
<tr>
<td>Day-care centres (semigovernmental)</td>
<td>828</td>
</tr>
<tr>
<td>Licensed midwives (private)</td>
<td>471</td>
</tr>
<tr>
<td>Physicians (private)</td>
<td>432</td>
</tr>
<tr>
<td>Institute of MCH (private)</td>
<td>159</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9056</td>
</tr>
</tbody>
</table>

In 1974, in addition to the 9056 trained TBAs there were about 20 700
TBAs who were either self-taught or had received their orientation in mid-

Because of the incomplete processing of data on the 10 500 TBAs trained
since 1974, it is impossible to determine their distribution by age group or
source of training. Moreover, there is as yet no systematic way of collecting
information on the rate of drop-out from training or on ability to learn as
related to age, educational level, etc.

**Evaluation of teaching and learning**

No systematic procedure has yet been developed for evaluating either the
teaching methods and materials used in the course or the extent of learning
on the part of the TBAs. Presumably the trainers develop impressions of
both teaching and learning through observing the behaviour of the TBAs
during individual and group discussions as well as during return
demonstrations. There is no formal way of appraising the trainers
themselves except through their periodic supervisory contacts with the
provincial nurse coordinator and the local public health nurse. As the
teaching of TBAs is a regular part of the duties of local nurses and
midwives, it is hoped that this aspect of their work will improve through
experience and through the monthly follow-up meetings they hold with the
TBAs.

The performance of trained TBAs, and what it suggests about their
learning, are discussed on pages 63–66.

**THE UTILIZATION AND SUPERVISION OF TRAINED TBAS**

**Utilization and role of trained TBAs**

As noted earlier, the Government’s intention in the TBA training
programme has been to provide a stop-gap measure for the delivery of
midwifery services until such time as there are enough professional personnel to meet the needs for MCH care. The trained TBA was never intended to become a staff member of the local health team and has never been issued a licence to practise. An amendment to the Philippine Midwifery Law indicates, however, that two categories of TBAs are allowed to continue practising: (i) TBAs who are registered with the Department of Health as having been trained in the art and practice of midwifery under UNICEF/Department of Health projects and (ii) TBAs who are certified by a proper health officer as having safely handled at least 20 deliveries and who are located in communities where the service of a physician or registered midwife is not available.

TBAs who fall into one of the above categories are, increasingly, being assigned to spend some time in the rural health unit assisting in minor health tasks and helping to establish contact with the community. Training does not entitle a TBA to serve in a staff capacity in any maternity unit in the country; she may work only as a helper, performing minor tasks assigned to her by the supervisor. Additionally, and for various reasons, no encouragement is given to a trained TBA, however senior she may be, to supervise more junior TBAs.

Where a qualified midwife is available, the TBA who is called upon to attend a birth generally suggests that the midwife also be called. This is in keeping with the understanding that trained TBAs should manage deliveries only when a qualified practitioner is not available. In cases where both the TBA and the midwife attend the birth, the TBA will perform such tasks as boiling the instruments, cleaning the area where the delivery will take place, washing all equipment and linens used during delivery, and making postpartum visits to the mother and infant. The midwife manages the delivery of the baby and placenta and cuts and dresses the cord. Thus, the role of the TBA has been changing gradually from that of being the sole birth attendant to that of providing support to the midwife and managing postpartum care.

Where the midwife is not available for domiciliary deliveries, the TBA is encouraged to refer patients to health establishments, particularly in cases of potentially complicated deliveries. In such instances she forfeits responsibility for the patient's management in favour of the referral unit. The TBA's relationship with local health staff is such, however, that generally the patients she refers are sent back to her for any necessary follow-up care. Thus the relationships between the TBA and her patients are retained.

**Supervision**

As mentioned earlier, during the final session of the TBAs' training course, plans for their supervision are discussed. According to these plans, the midwife or public health nurse in the community concerned is supposed to convene monthly meetings for the TBAs under her jurisdiction. These meetings are considered as important as—and perhaps even more
important than—the 10 sessions that constitute the basic training course. For this reason, at the present time, honoraria are being provided to supervisors for the holding of such meetings.

The main purposes of the monthly meeting are to allow the supervisor (whether the midwife or the public health nurse) to
○ learn about the births attended by the TBAs;
○ inspect their delivery kits;
○ provide them with supplies;
○ furnish further guidance and refresher training.

The TBAs are given additional instruction on proper birth attendance procedures and on methods of recruiting family-planning acceptors. Each TBA is encouraged to discuss the problems she has encountered, and the supervisor and the other TBAs try to help her find solutions. Sometimes the municipal health officer attends the meetings.

As a part of the supervisory process, each trained TBA is issued a booklet containing 64 copies of a form for recording the births she attends. The form calls for the names of father, mother, and baby; sex of baby; and place, date, and hour of birth. Illiterate TBAs are encouraged to seek the help of a literate member of the family or community in completing the form. The outside front cover of the booklet provides space for the name and address of the TBA and the municipality and province in which she practises. On the inside front cover there is space for a record of the monthly meetings attended by the TBA (i.e., the date of each meeting attended and the supervisor’s signature attesting the attendance).

Each TBA is expected to bring her record book to the monthly meetings for review by the supervisor. In addition, the supervisor attempts to learn the circumstances under which the deliveries were conducted, the health status of the mother and infant, and the incidence of complications and of prenatal referrals. The extent to which data of this nature are recorded by the supervisor varies, since the form issued to supervisors by the Division of Maternal and Child Health (entitled Pilot Supervisory Record: Anecdotal Notes) simply calls for the data concerned, “observations/findings”, and “action taken”. What the observations/findings are to focus on is not stipulated. In any case, the completed form is to be attached to the respective TBA’s registry card at the local level, as a reference for the supervisor.

The supervisory activities of the midwife or public health nurse are monitored at higher levels of health administration. Two forms for this purpose have been developed by the Division of Maternal and Child Health. One of these is a form which the midwife and the public health nurse jointly complete, during the month of December, as a plan for the supervision of each TBA during the ensuing year. Instructions on the form request supervisors to plan their activities in such a way that, by the end of the ensuing 12-month period, they will have observed the actual performance of each TBA with respect to each of the following: antepartum care, delivery, postpartum care, and care for the newborn. For each such
observation, the supervisor is expected to accompany the TBA to the home where she is to provide the care. The plan is also expected to provide time for conducting the TBA training course and for the monthly meetings of TBAs. At the end of each quarter, the supervisor concerned completes a form which calls for a summary of the activities completed during the quarter, e.g., number of TBAs observed with respect to each of the types of care mentioned above, number of monthly meetings conducted, number of TBAs attending the meetings, topics discussed at the meetings, and the problems encountered. This form is completed in triplicate and a copy each is sent to the provincial or city nurse supervisor and to the Division of Maternal and Child Health. The third copy is filed in the local health unit.

The process of the supervision of TBAs in the Philippines is as described above. However, it is essential to note that this process is carried out only to the extent that supervisory staff are available. While an effort is being made to increase the number of rural midwives, their number falls far short of what would be needed both for the proper training of TBAs and the maintenance of quality control over the practice of the trained TBAs. Even when the monthly meetings are held, there may be problems. For example, in a study carried out in Oriental Mindoro in 1972 (8), health staff who were interviewed complained about the low rates of attendance at these meetings and the failure of many TBAs to bring their kits to the meetings (among excuses for the latter being that “the kit is too heavy” or that “it has just been washed and is still wet”).

As emphasized earlier, the Government’s training programme for TBAs focuses on the TBA’s midwifery activities. In recent years, other agencies have seen in the TBA a means for extending other kinds of service and have organized training programmes for these purposes. TBAs trained for other purposes would, of course, require supervision by personnel with training and experience in the activities concerned.

PERFORMANCE OF TRAINED TBAs

Proportion of births attended

The lack of adequate data makes it impossible to assess the types and amount of services rendered by trained TBAs in comparison with those rendered by untrained TBAs and by professional health staff. First, the system of recording births does not allow one to ascertain whether the birth attendant was trained or untrained. Second, there is considerable under-reporting of births and deaths. As noted earlier, about 30% of births in one province were not reported. While this proportion cannot be generalized to the country as a whole, it nevertheless provides some measure of the magnitude of the problem. There is also the possibility that a considerable proportion of unreported births are attended by TBAs, among them trained TBAs. The proportion of total births attended by TBAs might thus be larger.

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than the proportion of registered births they are reported as having attended. According to the National Census and Statistics Office’s report for 1974 (17), TBAs attended about 38% of all reported births. On the basis of the above assumption, the proportion of all births attended by TBAs is probably much higher. Additionally, it is noteworthy that many births are attended by a professional health worker together with a TBA. In such cases, the birth is reported as having been attended by the professional health worker only.

Because of financial constraints, not many midwives were added to the health labour force during the period 1968–76, despite the increase in population. Thus, the percentage of births attended by midwives decreased over the years while that attended by TBAs increased. During the period 1970–72, for example, the average decrease on the one hand was about 18% and the average increase on the other was about 17%. There was great variation, however, from one province to another. In the Province of Abra for example, the proportion of births attended by midwives dropped from 35% to less than 10%, a decrease of over 70%, while the proportion attended by “others” (i.e., persons other than a physician, a midwife, or a nurse, such persons being primarily TBAs) rose from 46% to 81%, an increase of about 75%. In the Province of Bulacan, on the other hand, there was only a 6% decrease in attendance by midwives and a 10% increase in attendance by TBAs. In 1972, in over half the provinces of the Philippines the proportion of births attended by TBAs was over 60%. In 8 of these provinces, the proportion was over 80% (15, 16).

During the period 1976–79, with a loan from the World Bank, over 6200 midwives were posted to barangay health stations. This is expected to result in a considerable increase in the proportion of births attended by midwives and in the amount of other health (including MCH) services they provide. The records of all rural health units visited by a WHO consultant in 1978 indicated that 65–75% of recorded births were attended by midwives or other professional health workers, which would imply that 25–35% were attended by TBAs and other nonprofessional categories of workers. Again, it must be borne in mind that a large proportion of births are not registered and that most of these may have been attended by TBAs. In Bohol Province, when some 30 midwives were added to the force of 92 midwives in 1977, the proportion of births attended by midwives increased from 27% in September 1978 to 56% in May 1979, while births attended by TBAs decreased from 63% to 35% over the same period (6). From a recent report of the national Health Planning Office (21) it was possible to estimate that about 50% of births in 1977 and 1978 were attended by TBAs.

Other aspects of performance

Aside from the varying data on the number and proportion of births attended by TBAs, there are no up-to-date systematized figures to show how the TBAs are performing in other respects. The most recent
information derives from a sample study carried out in 1972 in 5 municipalities of the Province of Oriental Mindoro involving interviews with 89 TBAs, 85 clients of the TBAs, and 11 staff members of rural health units (i.e., 4 physicians, 2 nurses, and 5 midwives) (8). This study sheds some light on the behaviour of the sample of TBAs, 82% of whom had been trained by the Department of Health prior to 1971. In the findings cited hereafter, no distinction is made between the 82% of trained TBAs and the 18% of untrained TBAs in the sample.

Prenatal care. The majority of TBAs (96%) were consulted for prenatal care. The majority (86%) reported that most mothers consulted them for the first time between the first and seventh months of pregnancy. The number of prenatal consultations ranged from 1 to 5 per patient, with 32% of the TBAs claiming that their patients saw them only once, 37% twice, and 26% three times before the birth of the baby. Responses from the patients interviewed showed that 40% called the TBA only for delivery, not for prenatal care. Of those who consulted the TBA for prenatal care: over half sought the initial consultation between the seventh and ninth months, while less than a third sought it between the fourth and sixth months; about a half had only 1 prenatal consultation with the TBA, less than a third had 2, and the remainder had 3 or more. Over half of the TBAs (61%) admitted massaging the abdomen of their clients to ensure the proper positioning of the fetus. Of this proportion, 3% also referred clients to the health centre for prenatal care. Only 2 TBAs in the sample asserted that they did not massage their patients but sent them directly to the health centre. It should be noted that the majority of the TBA clients stated that they consulted the TBA during the prenatal period mainly for the massage and the checking of the position of the fetus. Health staff, on the other hand, viewed prenatal massage as a dangerous practice. Most TBAs (84%) advised prospective mothers on diet and activities. Most of the advice was considered by health staff as being harmless and some was viewed even as beneficial.

Delivery. All the TBAs in the sample gave indications that they were able to recognize signs of possibly complicated deliveries. In such cases, 52% consulted a physician, 33% consulted a midwife, 5% consulted another TBA, 5% consulted no-one and presumably handled the births to the best of their ability. Of the sample of clients interviewed, 76% stated that all of their children had been delivered by a TBA alone, 20% stated that most of their children had been delivered by a physician or midwife, with the TBA assisting, and 4% had not called upon the TBA to either manage or assist in the delivery.

Postnatal visits. Over half (53%) of the TBAs stated that they paid postnatal visits for as many as 14–17 days after the birth, 17% for 13 days or less, and 30% for 18 days or more. Of the patients interviewed, 41% stated they received postnatal visits from the TBA for 14–17 days after the birth, 27% for 13 days or less, and 26% for 18 days or more.

Shortcomings of TBAs. While all 11 staff members of rural health units who were interviewed recognized the need for and even the value of TBAs in
the communities that lacked qualified health personnel, they also pointed up some shortcomings, particularly:

- the failure of certain TBAs to use aseptic methods;
- their persistent use of the harmful practice of abdominal massage;
- their failure to make referrals at a sufficiently early stage;
- their failure to report all births attended.

Reporting of births. Each trained TBA is given, as noted earlier, a booklet in which to record data on all births attended. However, according to the report of the Oriental Mindoro study, the TBAs rather easily agreed to the parents’ request that the birth of their child should not be reported. One of the reasons for such requests was that parents could not afford the birth registration fee. This is perhaps wrongly stated; the Civil Registry Law does not require any fee for the registration of births and deaths. What has happened is that some local governments charge a nominal fee for issuing a birth certificate which will be used later when the child goes to school and for other official transactions.

Delivery kits. It was noted earlier that health personnel complained about the failure of certain TBAs to bring their kits for inspection at the monthly meetings. Moreover, such kits as were inspected were often found to be unclean or to contain unsterile objects. In the Oriental Mindoro study, some kits were found to be so neglected that, for example, the rubber parts of the water bag were disintegrating. In some kits the contents looked so new that health staff wondered if they had ever been used. In other cases certain pieces of equipment were missing from the kit, the item most often missing being the scissors. Even TBAs who might have been inclined to practise as they had been trained were seriously hampered by the chronic shortage in rural health units of instruments and even of such basic supplies as cotton, gauze, and alcohol.

The assessment presented above pertains to the situation in only one province in 1972. To what extent it reflects the former or present situation elsewhere in the Philippines has not been substantiated by statistics. From written and oral reports of nurse supervisors and local nurses and midwives during the past few years one gains the impression that the performance of trained TBAs is improving—that more of them are referring patients to the local health services for prenatal and postnatal care; that more are willing to seek help from and collaborate with the local health staff as regards delivery; that manipulation of the abdomen of a woman in labour is less frequent; that more are cooperating in programmes of immunization, family planning, and nutrition; and that births are being reported more frequently.

IMPACT OF TRAINED TBAs ON HEALTH STATUS

No objective study has yet been undertaken to measure the impact that trained TBAs have made on the health status of women and children. Plans are under way for such a study, however, and financial assistance from an international agency is anticipated.
Because of current practices in the registration of vital events such as births and deaths, as explained earlier, it is not possible to ascertain the role of trained TBAs in such events. The Ministry of Health's information system is how being developed to allow for a more systematic collection and analysis of essential health and medical information. Until such time as more accurate data are available, one can only assume that trained TBAs played some role in the decreasing rates of maternal and infant mortality between 1954 and 1970. More recently, however, infant mortality, as noted earlier in this report, appears to be rising if one is to judge from data for 1970 and 1976, when the rates were 59 and 74, respectively. Similar data emerged from the Bohol project where, from April 1975 to September 1978, the infant mortality rate rose from 66 to 75. During the same period the rate of death among children aged 1–4 rose from 4.9 to 8.4 in the project area (25). Moreover, the crude death rate rose from 6.7 in 1970 to 10.6 in 1976 (13, 16). These increases suggest that there must be certain factors at work which lie beyond the power of health personnel, including TBAs, to overcome—factors that have to do with poor housing, nutrition, environmental sanitation, etc., i.e., with poverty.

A more specific indication of the trained TBA's impact may be derived from a study of the decline in deaths from neonatal tetanus in relation to the extent of TBA training. For example, in Bohol Province, where the training programme has been so intensive that only 1% of the recorded births had been attended by untrained TBAs in 1979, there has been a marked reduction in the rate of death from neonatal tetanus, as can be seen from the following table (5):

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of live births</th>
<th>No.</th>
<th>No. per 1000 live births</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>10 260</td>
<td>26</td>
<td>2.53</td>
</tr>
<tr>
<td>1976</td>
<td>11 012</td>
<td>12</td>
<td>1.09</td>
</tr>
<tr>
<td>1977</td>
<td>11 849</td>
<td>8</td>
<td>0.68</td>
</tr>
<tr>
<td>1978</td>
<td>11 949</td>
<td>4</td>
<td>0.03</td>
</tr>
<tr>
<td>1979 (Jan.–June)</td>
<td>5 643</td>
<td>2</td>
<td>0.03</td>
</tr>
</tbody>
</table>

The Division of Maternal and Child Health has been conducting a review along similar lines for selected provinces, in one set of which TBA training has been intensive since 1975 and in the other only nominal. Because at the time of writing official figures for live births are not available for years beyond 1976, no rates of death from neonatal tetanus for recent years can be calculated. A partial picture of the trend can be gleaned, however, from absolute numbers and the percentage reduction in the incidence of deaths from neonatal tetanus. Thus, in the provinces where the training of TBAs was nominal (i.e., where 25% or less of TBAs had been trained), the average annual incidence of death from neonatal tetanus declined from 49 in 1973–75 to 41 in 1976–77 and to 29 in 1978—an overall decline of 41%. On the other hand, in provinces where 40% or more of the TBAs had been
trained, the incidence declined from 41 in 1973–75 to 28 in 1976–77 and to 6 in 1978—an overall decline of 85%.  

Others factors that may be influencing the decline in deaths from neonatal tetanus are, of course, being examined, e.g., birth rates, number of midwives in rural health units, number of births in hospital, and the expanded programme of immunization.

CONCLUSIONS

TBAs are undoubtedly providing health services to people who cannot under present circumstances be covered by the public and private sectors of the health system. While efforts are being made to increase the resources of these sectors, it may be many years before they reach the necessary level. It is essential, therefore, for the Government to pursue more vigorously its efforts to train TBAs and to ensure by means of supervision and logistical support that they practise safely.

In order to evaluate the contribution of trained TBAs to health development, considerable improvement would be needed in the system of information gathering and analysis. As indicated in the body of this report, there is practically no solid evidence to show either the quantity or quality of the health work performed by trained TBAs. The lack of evidence is due not only to underreporting of vital events but also to deficiencies in the content of many of the birth and death reports that are made. Aside from this, resources for the supervision of the TBAs are not sufficient to permit systematic, direct observation of their performance. Moreover, there is no uniform system of reporting that reflects either the quantity or the quality of the various services provided by TBAs. Forms completed by supervisors and sent to the central level call for information only on the work of the supervisors (e.g., number of TBAs observed, number of monthly meetings held), not on the actual work of the TBAs.

Some attempts are being made to train TBAs for health work over and above birth attendance (e.g., in primary health care and nutrition). There is little information available to show the degree of effectiveness of such training. Until more evidence in this respect is available, it is not possible to pass valid judgement on whether efforts should be pursued to enlarge the TBA's range of tasks. In any case, decisions in this regard would need to take into account the fact that the TBA is practically the only health worker in the community providing midwifery services and as such neither competes with nor receives competition from other community workers. If the TBA's range of tasks were expanded satisfactory working relationships would need to be created between her and the community workers who share the same tasks. It would also require the TBA to have different supervisors for the different tasks she is expected to perform; alternatively,

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1 BACALZO, F. Infant deaths from tetanus in selected provinces. (Unpublished report prepared for the Ministry of Health, Division of Maternal and Child Health, Manila, 1979.)

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her traditional supervisor (i.e., the midwife) would need more training to take on the additional supervisory functions involved.

The extent to which TBA training is expanded, both in content and in numbers of TBAs trained, will depend on the extent to which the needs of mothers and children can be met through other resources. Present policy is to view the TBAs as a stop-gap resource. Whether sufficient quantities of more highly qualified health workers can be produced to take their place will depend on the resources at the country’s disposal.

REFERENCES


CHAPTER 4

SIERRA LEONE:
PRACTICES OF UNTRAINED TBAs AND
SUPPORT FOR TBA TRAINING AND
UTILIZATION

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Investigator, Michigan Department of Natural Resources, Michigan, USA

INTRODUCTION

Sierra Leone lies in the tropical rain forest belt of West Africa on the
Atlantic coast, between Guinea and Liberia. It is basically an agricultural
country, with about 75% of the population living in rural areas. The
Western area, which includes the capital, Freetown, has the highest
population density, 350 people per km², while the remaining regions
average 27 people per km² (7). Of the 17 major indigenous tribes, the
Mende in the centre and south, and the Temne in the north, are the largest
(7).

This case study focuses on the TBA in the Mende tribe and the tribe’s
secret society for women, the Sande Society.

Traditional birth attendants conduct approximately 70% of all deliveries
in the country (5). Typically, the TBA is a middle-aged or elderly woman
who is knowledgeable about the traditional practices and skills valued by her
community. The Sande Society, of which the TBA is usually a prominent
member, is the women’s stronghold and promotes the traditional cultural
practices and beliefs affecting maternal and child health. It also serves as a
classroom for the women’s community, within which the TBA is the
primary teacher.

Aware of the TBAs’ influential position in the community, and concerned
about the excessively high rate of neonatal tetanus among the infants they
deliver, the Ministry of Health of Sierra Leone embarked in November 1974
upon a TBA training programme. Two 3-week courses have been held twice
a year with 30 TBAs in each; thus about 120 TBAs have received training
annually since 1974 (7).

Methodology

The data in this report are largely those that the author was able to gather
while conducting a research study on the role and practices of TBAs in the

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Southern and Eastern provinces of Sierra Leone. The author lived with three accomplished TBAs over a 6-month period and accompanied them as they went about their varied duties. A number of deliveries attended by other TBAs were also observed.

An informal questionnaire was administered to 22 TBAs (see Annex) in the course of daily conversation. Some replies to these questions will be referred to in this report.

Although illustrations were drawn primarily from among the Mende, similar practices and beliefs concerning pregnancy and child care were observed among other Sierra Leonean peoples with whom less time was spent. It is hoped therefore that the material presented here will offer some insights into the role and functions of TBAs throughout Sierra Leone.

BACKGROUND TO THE TBA TRAINING PROGRAMME

The Sande Society: the societal institution within which TBAs practise

The Sande Society has been called the "central pillar of dependability amongst the Mende women". The sociologist Kenneth Little in discussing the position of women among the Mende says: "... their influence operates, in the main, indirectly and beneath the surface. The Sande Society, which carries out the entire responsibility for training and social indoctrination of the female side of the community, is an example of this" (4).

Notably different from other secret Mende societies, the Sande is a highly self-determined institution and is significantly open to member-initiated change. Individual high-ranking and competent Sande women may decide to open a new chapter (or "bush")—the actual locale where the Sande house is located—if there are enough potential initiates to warrant it and if competition with the other Sande chapter(s) in the area is not too great. The woman in charge of a Sande chapter is known as the majo or "Headwoman" and very often occupies the role of traditional birth attendant as well. Regardless of whether she attends births, the majo exerts much influence on women at the onset of menstruation and during pregnancy.

Initiation into the Sande Society usually occurs between the ages of 12 and 15 years and in some areas may last up to three months, though 2–3 weeks is more usual depending upon the number of initiates and the particular "bush". During the initiation period the girls are taught proper patterns of behaviour to men and elders, the values of thrift and hard work, the structure of the tribal organization, songs and dances, and daily household duties, and are given information on native medicaments and on all matters related to sex relations and taboos. Female circumcision is performed during the initiation as a rite of passage. In Sierra Leone, simple

1 Unpublished paper on traditional midwifery among the Mende by T. K. Kargbo, Acting Medical Superintendent, Bo Hospital, Sierra Leone.
excision is the most common type of circumcision performed. The operation involves removal of the clitoris and sometimes of the labia minora as well. There have been reported cases of death due to shock and haemorrhage following the excision, but in Sierra Leone today these are fortunately rare.¹ Circumcision is laden with tribal and religious significance—as well as being an important foreshadowing of childbirth—and is therefore likely to prevail in spite of external pressure to make the practice illegal. Completion of the initiation period marks the girl's membership in the Sande Society and signals her readiness to assume adult roles and responsibilities within the community.

The secretive nature of the all-female society segregates and protects the women from the men and enhances their spirit of camaraderie and loyalty to the matriarchal group. In villages where the Sande chapter is particularly influential, most births take place at the Sande house, which reinforces the strength and prestige of the Society through the display of mysterious reproductive powers.

*Characteristics of untrained TBAs*

The most accomplished birth attendant in a village will usually be deeply involved in the Sande Society. Gradations of skill and quality of care are recognized among the TBAs in any given area, and those whose expertise has gained them a reputation of being "too perfect" are preferred. The major criteria by which a TBA becomes classified as "too perfect" are age, experience, compassion, "strength of heart" (i.e., courage and calm in times of stress), social standing in the Society, and formal training experience. The only requisites for becoming a TBA are marriage and pregnancy, which presupposes Sande membership. Women who have never borne children may be TBA assistants, although the high status of "too perfect" TBA is generally not available to childless women. Success in childbearing and rearing is not, however, a criterion for an esteemed position as TBA. Of the TBAs interviewed, few had managed to raise the majority of their children to adolescence, yet all were none the less widely respected.

Many practising TBAs have been influenced toward the vocation of childbirth attendance by a close female relative who was herself a TBA. Generations may, however, be skipped in a long line of TBAs if the daughter does not show an interest in or aptitude for midwifery. The casual "apprenticeship" which serves as midwifery training consists of accompanying and assisting the relative, or other TBAs in the community, at deliveries. Depending on certain variables, this apprenticeship lasts about two years. After functioning as TBA assistants, the apprentices eventually become independent practitioners or succeed their teacher upon her retirement or death.

It is estimated that 20% of non-hospital deliveries are attended by

¹ T. K. Kargbo, *op. cit.*
someone other than the indigenous TBA (5), usually the child’s blood grandmother. As the extended family system is still very strong in Sierra Leone, this designation of “grandmother” is also given to the non-kin TBA. The birth attendant’s derived status as grandmother provides a link nearly as binding as true kinship and often results in one or two “too perfect” TBAs being thought of as the grandmothers of an entire village.

Women who are known as “too perfect” TBAs yet who are not Sande majos are accorded a more personal respect than the majos since their identities are not inextricably bound to the Sande Society. Moreover, because the loyalty of such TBAs is not primarily to the Sande institution but rather to birth attendance, they appear to be more receptive to health and medical information than are the TBAs who are also majos. Majos, being responsible to an institution which is concerned with many issues beyond the realm of pregnancy and childbirth, seem to be less interested in learning new approaches.

All the TBAs interviewed shared the conviction that their job as birth attendant was very important in the community. They also reported that many of the younger women did not come to seek their advice unless the pregnancy was problemmatic and, even then, might not follow the advice given. The pregnant woman is more likely to seek advice from her mother and elder kinswomen, who will attempt to oversee her adherence to certain codes of pregnancy conduct.

Most of the TBAs interviewed stated their occupation as farmer. Without exception they identified themselves as herbalists with a specialization in maternal and child matters. While the TBAs did not freely discuss their role in helping women secure abortions, they knew and presumably used plants described as abortifacients (see Table 1, page 77). In a study of village women, the social scientist Thomas E. Dow, Jr, found that some four-fifths of them had used “Traditional Methods”—including native medicine and abortion) as a specific method of family planning, although he also found them to be considerably pronatalist in their attitudes (2).

The TBAs who are also Sande majos are almost always very old women who live alone in the Sande Society house. In addition to organizing and convening the annual initiation meetings, the majo guards the Society medicines consisting of herbal mixtures and prescribed invocations and acts formally as the women’s “consultant” and representative in the community. The other elderly TBAs who no longer farm described their activities as caring for grandchildren, spinning, weaving, cooking, and other general household chores.

Antenatal beliefs and practices of untrained TBAs

Many TBAs stated that through experience they could recognize a pregnant woman by the following “symptoms”: her skin and hair look “fresh”, she doesn’t look “dry” (she puts on weight), her face becomes paler, breasts become engorged, nipples darken, she walks differently, and
her belly becomes “swollen”. The definitive indication of pregnancy, however, is the cessation of menstruation. One of the first actions newly pregnant women take is to acquire the services (“medicines”) of a seer, moray man, alpha, or other fortune teller to ascertain what specific talismans or charms may be required for a successful pregnancy. Generally this “medicine” is given in the form of amulets with instructions on pregnancy conduct and practices.

Among the Mende, the fear of witches, juju curses, and other supernatural activities is widespread and it is believed that certain precautionary measures must be taken to safeguard the mother and fetus against them. One purveyor of such notions is the TBA. Most of the pregnancy-related codes of conduct are based on the idea that the child in utero imitates its mother and can be affected in its development by forces acting in or on the mother. Some of the taboos and the justifications given for them are as follows:

**Foods to be avoided during pregnancy**

<table>
<thead>
<tr>
<th>Food</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans (and other vine plants)</td>
<td>cause strangulation by the cord</td>
</tr>
<tr>
<td>Cassava tuber</td>
<td>causes the cord stump to take too long in dropping off</td>
</tr>
<tr>
<td>Coconut milk</td>
<td>causes postpartum haemorrhage</td>
</tr>
<tr>
<td>Eggs</td>
<td>cause infant asphyxia and various other problems, as the egg is the unborn child of the chicken, which is a sacred bird for the Mende; therefore, reprisal may be taken against one’s own child</td>
</tr>
<tr>
<td>Fish</td>
<td>causes worms in newborn babies and pregnant women, which may lead in turn to “unclean stomach” and diarrhoea</td>
</tr>
<tr>
<td>Eggplant</td>
<td>causes thrush or skin disease in the newborn</td>
</tr>
<tr>
<td>Plantain or banana</td>
<td>causes prolapsed cord, sunken fontanelle, retained placenta, and constipation in the mother</td>
</tr>
</tbody>
</table>

**Practices to be avoided during pregnancy**

<table>
<thead>
<tr>
<th>Practice</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing in the doorway</td>
<td>causes obstructed labour</td>
</tr>
<tr>
<td>Standing with arms crossed over breast</td>
<td>causes obstructed labour</td>
</tr>
<tr>
<td>Sleeping too much and not moving about</td>
<td>causes uterine inertia and dolt child</td>
</tr>
<tr>
<td>Going halfway on any journey and then returning to place of origin</td>
<td>causes prolonged and difficult labour</td>
</tr>
<tr>
<td>Washing heavy clothing</td>
<td></td>
</tr>
<tr>
<td>Lifting heavy loads</td>
<td></td>
</tr>
<tr>
<td>Intercourse after sixth month of pregnancy</td>
<td>cause abortion</td>
</tr>
<tr>
<td>Extramarital intercourse</td>
<td></td>
</tr>
<tr>
<td>Dreaming of extramarital intercourse</td>
<td></td>
</tr>
<tr>
<td>Talking about unborn child or making preparation for its arrival (pur chasing clothes, making layettes, etc.)</td>
<td>cause various problems by drawing attention of witches who may use words or articles as vehicle for evil curses</td>
</tr>
<tr>
<td>Wearing new clothes during pregnancy</td>
<td></td>
</tr>
</tbody>
</table>

1 Plenty of fresh fruit, rice, and palm oil are encouraged as part of the pregnant woman’s diet.
Practices to be avoided during pregnancy

Sitting on the edge of a wooden bed  
Splitting wood  
Fishing too long  
Planting rice  
Drinking leftover (stale) water  
Engaging in antisocial behaviour, e.g., arguing with co-wives, friends, husband, or other contacts

Wearing a brassiere or tossing one’s lappa (sarong-type skirt) around neck  
Bathing at night  
Walking about at night without protection of a stone or knife tied in corner of lappa  
Resting in an easy chair or hammock  
Standing at crossroads

Reason

causes sunken fontanelle  
causes prematurity

causes various problems by drawing evil spirits and creating potential for curse to be invoked  
causes nuchal cord

cause fetal abnormalities since these practices will draw evil spirits  

causes face presentation  
causes transverse lie and difficult labour

In addition to promoting adherence to these taboos, during the antenatal period the TBA is responsible for bringing out (“pulling”) the herbal medicines’ special qualities for the pregnant woman. These are used to help ensure a safe term of pregnancy, alleviate pregnancy-related discomforts, or induce stronger contractions during labour (4). Having done everything to promote the child’s healthy arrival, the TBA states that the delivery itself is “in God’s hands”.

Delivery beliefs and practices of untrained TBAs

Little immediate preparation is made for impending childbirth by either the TBA or the pregnant woman. The facilities and equipment generally consist of a woven mat for the mother to lie on, homemade soap for washing the baby and/or the TBA’s hands, pots for water and to mix medicine in, a razor blade, kitchen knife or small machete to cut the cord, and a clean cloth or rags to wrap the baby in and to clean up afterwards. These items may be collective Sande Society property or they may be provided by the pregnant woman.

A primigravida is given no information on childbirth prior to labour; it is believed that knowledge of the event would make her so frightened that she would seek an abortion. At the time of delivery primigravidas are strongly coached in how to control their noise level by making very high pitched sounds and snapping their fingers at the peak of contractions. The TBA’s primary directive to the woman in labour, “hold your heart”, meaning that she is to be very quiet. If the woman complies, she may deliver in her own house or the Sande house if she so chooses. If the woman’s complaints become too loud she is removed from the house and will be taken far enough away from the village, on Sande Society land, so that her complaints cannot be heard by the villagers. While the practice of imposed silence may meet the need for privacy in a small village, it frequently leads to maternal and fetal complications. The threat of loss of consciousness during labour is
ever present, not because of typical hyperventilation but because of underbreathing. The practice is partly explained by the pride and secrecy of the Sande Society: men are not to know about the pain entailed in childbirth, since it is a women’s affair. If the women cried out, the TBAs fear that the husbands might become angry and accuse them of malpractice or “bad magic”.

In the case of multiparas, labours are rarely managed at all.

**Table 1. Indigenous medicinal plants used by TBAs in Sierra Leone**

<table>
<thead>
<tr>
<th>Indigenous name</th>
<th>Scientific name</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pregnancy-related plants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keololu (Limba)</td>
<td><em>Neobaudia laevis</em></td>
<td>Eases abdominal pain in pregnant women</td>
</tr>
<tr>
<td></td>
<td>Bignoniaceae</td>
<td></td>
</tr>
<tr>
<td>Budada (Limba)</td>
<td>Papilionaceae</td>
<td>Alleviates abdominal pain in pregnant women</td>
</tr>
<tr>
<td>Budendu (Limba)</td>
<td><em>Spondias monlin</em></td>
<td>Alleviates headache in pregnant women</td>
</tr>
<tr>
<td></td>
<td>Anacardiaceae</td>
<td></td>
</tr>
<tr>
<td>Bushangary</td>
<td><em>Veronica garberiformis</em></td>
<td>Given to pregnant women to make fetus healthy</td>
</tr>
<tr>
<td></td>
<td>Compositae</td>
<td></td>
</tr>
<tr>
<td>Bupompea</td>
<td><em>Floua vaillia-choude</em></td>
<td>Given early in pregnancy to ensure safe delivery</td>
</tr>
<tr>
<td></td>
<td>Moraceae</td>
<td></td>
</tr>
<tr>
<td>Bushombo (Limba)</td>
<td>Unknown</td>
<td>Increases fetal movement and strength</td>
</tr>
<tr>
<td>Behocroochooro</td>
<td><em>Agaratum conyloides</em></td>
<td>Given in 6th month of pregnancy for relief of itching</td>
</tr>
<tr>
<td></td>
<td>Compositae</td>
<td></td>
</tr>
<tr>
<td>Hoyei</td>
<td><em>Cousus afer</em></td>
<td>Cleans baby in utero</td>
</tr>
<tr>
<td></td>
<td>Zingiberaeae</td>
<td></td>
</tr>
<tr>
<td>Yombuyabei</td>
<td><em>Nauclea latifolia</em></td>
<td>For relief of constipation (especially in pregnant women)</td>
</tr>
<tr>
<td></td>
<td>Rubiaceae</td>
<td></td>
</tr>
<tr>
<td><strong>Labour-inducing plants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imperey (Limba)</td>
<td>Unknown</td>
<td>Induces and increases labour pains; quickens contractions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Induces labour; quickens contractions</td>
</tr>
<tr>
<td>Arrata</td>
<td>Common name: Never-die or Mouse-ears</td>
<td></td>
</tr>
<tr>
<td>Boogbandi</td>
<td><em>Carlina papaya</em></td>
<td>Induces labour; quickens contractions</td>
</tr>
<tr>
<td>Koilt</td>
<td><em>Tetracera allissi</em></td>
<td>Induces labour</td>
</tr>
<tr>
<td></td>
<td>Dilleniaceae</td>
<td></td>
</tr>
<tr>
<td><strong>Abortifacients</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nanaal</td>
<td><em>Cathula proscra</em></td>
<td>Taken orally to induce abortion</td>
</tr>
<tr>
<td></td>
<td>Amaranthaceae</td>
<td></td>
</tr>
<tr>
<td>Mulawui</td>
<td>Unknown</td>
<td>Used to induce abortion</td>
</tr>
<tr>
<td>Bumet</td>
<td><em>Diterlanda corymba</em></td>
<td>Used to induce menstruation</td>
</tr>
<tr>
<td></td>
<td>Rubiaceae</td>
<td></td>
</tr>
<tr>
<td><strong>Plants for infants and children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrata</td>
<td>Common name: Never-die, or Mouse-ears</td>
<td>For dressing cord</td>
</tr>
<tr>
<td>Budendu</td>
<td><em>Spondias monlin</em></td>
<td>Alleviates fever in babies</td>
</tr>
<tr>
<td></td>
<td>Anacardiaceae</td>
<td></td>
</tr>
<tr>
<td>Bupompea</td>
<td><em>Floua vaillia-choude</em></td>
<td>Gives children the appearance of fitness, i.e., healthiness</td>
</tr>
<tr>
<td>Bukoko</td>
<td><em>Calancus cafen</em></td>
<td>Cures measles in children</td>
</tr>
<tr>
<td>Bundundoo</td>
<td>Unknown</td>
<td>Relieves fever in small children</td>
</tr>
<tr>
<td></td>
<td>Papilionaceae</td>
<td></td>
</tr>
<tr>
<td>Indigenous name</td>
<td>Scientific name</td>
<td>Purpose</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>---------</td>
</tr>
<tr>
<td>Kodoigboi</td>
<td><em>Solanaum verbascifolium</em></td>
<td>Solaraceae</td>
</tr>
<tr>
<td>Nika nyiryle</td>
<td><em>Oldenlandia corimbosa</em></td>
<td>Rubiaceae</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plants for treatment of constipation and diarrhoea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butana</strong></td>
</tr>
<tr>
<td><strong>Bigbwe</strong></td>
</tr>
<tr>
<td><strong>Wuwe jokoi</strong></td>
</tr>
<tr>
<td><strong>Yombuyatbe</strong></td>
</tr>
<tr>
<td><strong>Tehtehtel</strong></td>
</tr>
<tr>
<td><strong>Ku tay</strong></td>
</tr>
<tr>
<td><strong>Booyai</strong></td>
</tr>
<tr>
<td><strong>Unknown</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kodoigboi</strong></td>
</tr>
<tr>
<td><strong>Tonei</strong></td>
</tr>
<tr>
<td><strong>Jaykwey</strong></td>
</tr>
<tr>
<td><strong>Hoyei</strong></td>
</tr>
<tr>
<td><strong>Bundundoo</strong></td>
</tr>
<tr>
<td><strong>Crai crai</strong></td>
</tr>
<tr>
<td><strong>Deeleegbay</strong></td>
</tr>
</tbody>
</table>

At delivery time, the TBA first puts her patient at ease while she assesses the stage of labour by externally gauging the woman’s state of agitation and frequency of contractions. Rupture of the membranes is not considered to be a sign of impending birth as the “breaking of the water” frequently occurs well in advance of true labour pains and delivery. If labour is determined to be in an early stage, the TBA offers the expectant mother a concoction of laxative herbs to be taken orally to “clean her stomach”, though this is often refused as the woman will have taken a laxative on her own initiative before summoning the TBA. As Table 1 indicates, a large number of herbal medicines serve the purpose of correcting either constipation or diarrhoea, states with which the Mende are very concerned. A “dirty stomach”, the phrase used to describe the condition of not having had a bowel movement and also to explain diarrhoea, is of particular
concern for pregnant women, as the gastrointestinal tract and uterus are believed to be connecting organs.

After the mother is settled in a comfortable supine or semisupine position, the TBA palpates the abdomen to determine the presentation and degree of engagement. She may also put her head on the fundus to listen for sounds or to feel for fetal movement. Her hands may or may not be washed with water and sometimes soap before an internal examination. This is conducted using three fingers to feel for the head. Because of ignorance of physiology, the TBA generally encourages the woman to bear down long before full dilatation has occurred. This may cause exhaustion and exsanguination of the mother, resulting in fetal distress, infant asphyxia, or stillbirth. Following the vaginal examination, the TBA may lubricate the rim of the birth canal with palm oil in an attempt to minimize laceration of the anterior vagina—a common occurrence (Table 2).

Table 2. Anterior vaginal wall injuries in childbirth in relation to circumcision status and parity, Sierra Leone

<table>
<thead>
<tr>
<th>Cases (No.)</th>
<th>Superficial laceration</th>
<th>Deep laceration</th>
<th>No Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%)</td>
<td>No. (%)</td>
<td>No. (%)</td>
</tr>
<tr>
<td>Circumcised multipara (205)</td>
<td>140 (68%)</td>
<td>40 (20%)</td>
<td>25 (12%)</td>
</tr>
<tr>
<td>Uncircumcised multipara (40)</td>
<td>8 (20%)</td>
<td>2 (5%)</td>
<td>30 (75%)</td>
</tr>
<tr>
<td>Circumcised primipara (85)</td>
<td>60 (71%)</td>
<td>20 (23%)</td>
<td>5 (6%)</td>
</tr>
<tr>
<td>Uncircumcised primipara (20)</td>
<td>4 (20%)</td>
<td>1 (5%)</td>
<td>18 (76%)</td>
</tr>
</tbody>
</table>

Source: T.K. Kargbo, op. cit.
* * Number of cases seen in the Maternity Hospital, Freetown, over a 3-month period. The injuries were primarily of the clitoral sulcus.

If the woman’s labour does not progress satisfactorily, indigenous herbs are administered to induce contractions (Table 1, page 77). Complications are frequently viewed as evidence of a broken taboo, as reprisal by ancestors for some infraction, or the result of a curse. In all cases remedial action must be taken in order for the labour to proceed. This may involve driving out a demon, placating ancestors or speaking words of forgiveness, or gargling water and spitting on the ground to make mud which is then smeared on the fundus. Postpartum haemorrhage provides an explanation for the lack of menstrual flow during pregnancy and is seen as cleansing the woman of a build-up of ‘bad blood’. Thus, it is not alarming to the TBA.

Once the child is delivered and breathing normally, it is placed on the mat between the mother’s legs while the placenta is expelled. If the child does not breathe immediately, water is splashed and air blown on its face, and either the TBA or her assistant will suck out mucus from its nose and mouth. The infant is then bathed in a pot of warm water to which various herbs have been added, wrapped in a cloth, and given to the mother to put to the breast.

The umbilical cord is not severed until the placenta is delivered, which is expected to follow almost immediately but may take up to an hour. After expulsion, the placenta is set aside for ritual burial later on. The new mother is allowed to rest briefly and is then encouraged to help bathe herself while
the TBA and assistants clean the delivery area. If the placenta is retained beyond an hour, abdominal massage and fundal pressure will be exerted. If placental expulsion still does not occur, the cord will be cut and an axe will be tied to the end of the cord. The rope or coiled piece of cloth which was tied around the mother’s waist immediately after delivery in order to keep the placenta from suffocating her by rising into the chest cavity, will be tightened. Manual removal may be attempted by the TBA, or the new mother may be taken either to another indigenous practitioner with more magical skills or to the hospital. The latter option is often used as a threat to obtain the woman’s full cooperation as the hospital is almost always associated with foreign ways, surgery, tubes, and death. Furthermore, the nearest hospital may be many kilometres away and transport is frequently unavailable.

Perhaps the most serious consequence of the TBAs’ non-scientific understanding of childbirth and care of the newborn—and one of the most compelling reasons to provide them with training—is seen in the cutting and dressing of the umbilical cord. Neonatal tetanus accounts for approximately 27% of all infant deaths and is the main cause of perinatal death, though its exact percentage is incalculable as the majority of newborn deaths are unrecorded. Tetanus may be introduced to the baby through the instrument used to cut the umbilical cord. Generally this instrument will be cleaned with a piece of cloth, or rinsed in warm or hot water, but it is rarely sufficiently sterilized. The cord stump is left about 7.5 cm long and may be dressed with any of the following: juice squeezed from a banana leaf; spittle from chewing a kola nut, tobacco leaf, or snuff; petroleum jelly; mashed arrata (never-die leaf); deep ashes from the home’s cooking fire; talcum powder; chicken manure; cologne; or scrapings from the bottom of a clay drinking-water pot. These “medicines” are applied to the stump, which is then wrapped with a strip of rag.

In the days following the birth, the TBA may visit the family to give advice on matters relating to the puerperium and child care. If the child falls ill or is not gaining weight, the TBA will invariably be asked for advice and medicines to help ensure the baby’s survival.

In some villages the Sande Society helps to operate a dormitory-type house specifically for nursing mothers. It is common for women to remain at the house until their child is weaned and walking (approximately 11 months).

Health status of women and children

According to United Nations median variant projections, the population of Sierra Leone in 1975 was placed at roughly 2,983,000, with life expectancy in 1975–80 estimated at 44.4 years for males and 47.6 years for

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1 Unpublished paper by R. W. Coles on neonatal tetanus and the training of traditional midwives at the Nixon Memorial Hospital, Segbwema, presented to the Christian Health Association of Sierra Leone, May 1977.
females. Approximately 43% of the population was estimated to be under 15 years of age. With an estimated growth rate of 2.9 there would have been an increase of 132,000 to 150,000 people per annum (9).

**Infant and childhood mortality**

Perhaps the most urgent indications for improving maternal and child health services in Sierra Leone are the high infant morbidity and mortality rates. An unpublished survey on fetal, infant, and childhood mortality in Sierra Leone, conducted by Mr. C. V. G. Nair in 1972–75, showed that out of 416 total deaths over a 2-year period in a project region in the Western area, 32.4% were infant deaths and 28.4% deaths in the 1–4 year old age group. Out of every 5 deaths recorded in the project area, 3 were of children under 5. The study further revealed that the leading causes of infant death were conditions associated with birth, i.e., immaturity, asphyxia, etc., followed by tetanus. In the 1–4 year age group, measles led the causes of death, followed by diarrhoeal diseases, pneumonia, and malaria.

**Morbidity of infants and children under 5**

Reports from the Government’s under-5 clinics show that fever and cough are the overwhelmingly predominant conditions of morbidity in the under-5 age group. Neonatal tetanus accounts for 31.5% of all neonatal morbidity states. Among infants under 1 year old, diarrhoeal diseases are predominant, followed by the symptoms of fever and cough. Diarrhoea also heads the list of morbid conditions in the 1–4 age group, followed by kwashiorkor and marasmus, unspecified anaemia, skin infections, vomiting, malaria, and acute respiratory infections (3).

**Maternal mortality**

Of all female deaths in the 15–44 age group, 27.8% are due to complications of pregnancy and childbirth; it is assumed that 20% or approximately 24,000 deliveries a year are complicated.1 Only since November 1976 have maternal deaths been notifiable and thus national figures are not yet available.

According to a 1976 report, the largest maternity hospital in Freetown had a maternal mortality rate of 5.45/1000. Eclampsia, ruptured uterus, congestive heart failure, and pre-eclampsia were given as the leading causes of death (5).

**Morbidity among women aged 15–45**

On the basis of collated reports from 27 antenatal clinics, the Sierra Leone Ministry of Health reported that malaria was the most commonly

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1 Data from unpublished survey by C. V. G. Nair.
diagnosed disease in this age group in 1976, accounting for 20% of all illnesses unrelated to pregnancy (5). In order of decreasing prevalence followed avitaminosis, helminthiasis, sickle cell trait or anaemia, skin infections, and diarrhoea. The unpublished survey referred to earlier reported similar results.

Anaemia was the most frequent morbid condition related to pregnancy, followed by albuminuria, oedema, vaginal discharge, and urinary tract infections.

**MCH facilities, personnel, and care**

In response to the demonstrated need for improved maternal and child health care, the Ministry of Health in 1974 established the Maternal and Child Health Division. The designated responsibilities of the Division are: to formulate policies and establish standards for MCH care, to train and supervise MCH personnel, and to plan MCH activities. The Division is also responsible for MCH care in the hospital setting, for domiciliary services (including home deliveries by trained personnel), and for the provision of immunization and health education.

Throughout the country there are 27 static antenatal and under-5 clinics (usually held separately, though some polyclinics exist). In addition, mobile units and outreach clinics are sponsored by both Government and mission hospitals. Twenty-eight of these are officially listed by the Government (5). Owing to shortages of vehicles, petrol, and staff, however, these clinics are not always in operation. In May 1976, for example, the Ministry’s village clinic teams in the Western area stopped functioning altogether for lack of transport. In 1976 the MCH Division recorded a traffic flow of 53,858 children under 5 years of age through these clinics, with a total of 268,310 attendances or an average of 4.98 visits per child. At the antenatal clinics, 39,167 pregnant women registered and there were 72,576 revisits, making an average of 2.6 visits per patient (5). At all the antenatal clinics, iron tablets and vitamins are given almost routinely since anaemia is so widespread among pregnant women.

Immunizations are carried out by nurses and midwives in the under-5 clinics. The lack of vaccines is the most serious obstacle to achieving adequate coverage among children.

Health education at clinics most often takes the form of food preparation demonstrations. Some family planning information may also be given; referrals are made to the Planned Parenthood Association, which undertakes the bulk of family planning activities in Sierra Leone.

The major limitation to providing efficient MCH care is the lack of staff. In 1970 there were 149 physicians in the country (8) but a large proportion of these were working in the capital of Freetown (1), where only one-ninth of the population resides. The number of professionally trained midwives at the same time was 113, with auxiliary midwives numbering 163 (8). The
majority of these midwives were working in the capital as well. The distribution of health personnel has not changed significantly since that time. One way the Government has attempted to mitigate this problem has been to recruit trainees for lower-echelon health worker positions from villages on the understanding that they will return to their home areas upon completion of training. As early as 1930, an 18-month village maternity assistant training course was instituted in various provincial hospitals. This programme was discontinued in 1970 in favour of a modified curriculum for literate trainees with a new job designation of maternal and child health aide (MCH aide). By 1974, 88 MCH aides had completed the course, which emphasizes primary health care and midwifery. Unfortunately, because of lack of supervision, the work output of the MCH aides has not been satisfactory (5).

Within the MCH Division, the Health Sisters are primarily responsible for supervising all personnel involved in MCH work, conducting MCH clinics, and training and orienting MCH aides. Unfortunately, the severe shortage of supervisory staff has led to serious gaps in the performance of these functions (6). Throughout 1976 only one MCH aide supervisor was appointed in the country. This problem must be recognized as the most severe deterrent to the effectiveness of the entire MCH programme, which cannot be expected to develop efficiently until the shortage is corrected.

Policies and legislation concerning MCH, including family planning

At the monthly meeting of the MCH Advisory Committee, 20 MCH or related professionals gather to discuss and share ideas on the direction and focal points of MCH activity in Sierra Leone. Notwithstanding the concerted effort put in by all members, the Government has now formally recognized that its expressed goals of comprehensive MCH coverage, including immunization and health education/nutrition programmes, have not been met. Shortages of staff, equipment, and facilities have been cited as the explanation for this situation, which may also be traced to the health sector budget (5). Over the 10-year period from 1960–61 to 1970–71, the average annual increase for recurrent health care expenditure was 5.5%, an increase from Le 1 925 264 to Le 3 296 971. Salary and wage increases accounted for about 60% of the recurrent expenditure, with the remaining 40% being inadequate to keep pace with the rising costs of other staple supplies. Although Le 7.6 million was allocated for development expenditures on health under the National Health Plan of 1965–75, the actual capital outlay on health from 1961–62 to 1971–72 was only Le 2.3 million (or 2.4% of the total development expenditure of Le 94.4 million).

Acknowledging the budgetary neglect and consequent lack of development of the health sector, the 1974/75–1978/79 National Development Plan specified an allocation of Le 32 million for total recurrent expenditure, corresponding to a health sector growth rate of about 6.7% as compared to
5.7% for overall recurrent expenditure for the 5-year period under consideration (6).

Funds for MCH training and services

In that same plan, MCH services were given priority. To achieve the goal of improved MCH care, it was recommended that training be intensified of MCH aides and Community Health Nurses (a higher level of auxiliaries who can staff maternity and child health services at the field level). For the same period the investment schedule for MCH-related expenditures was: Le 250,000 to help establish maternal and child health centres; approximately Le 490,000 to establish paediatric clinics at each provincial and district hospital, a project also scheduled to receive Le 140,000 support from WHO and UNICEF; and an estimated Le 1 million for the construction of quarters in the provinces to alleviate housing shortages (6). No mention of or allowance for TBA training was made in the National Development Plan. Expenditures for TBA training were, therefore, minimal and kept within the normal operating budget (with the exception of external funding from UNICEF for TBA stipends and midwifery kits).

Family planning

No official policy exists on family planning though attitudes towards its inclusion in MCH work are favourable and child spacing for the promotion of general family welfare is encouraged at Government clinics. Since 1968 the Sierra Leone Planned Parenthood Association, with membership in the International Planned Parenthood Federation (IPPF), has been the active promoter of family planning information and services, with 4 clinics throughout Sierra Leone. The Ministry of Health relates formally to the Association in an advisory capacity, but informal collaboration and overlap of personnel are extensive. For example, the present mayor of Freetown, a doctor, is also the President of the Planned Parenthood Association; the Government’s Deputy Chief Medical Officer is the Association’s Director of Research, as well as being the Ministry of Health’s MCH Director. At the Association’s recent request the Government removed the duty on imported contraceptives, which are mainly distributed by the Association. Association case workers are allowed to prescribe and distribute most contraceptives, of which the pill and intrauterine device (IUD, or coil) are the most used modern methods. Abortion is illegal in Sierra Leone except in medically prescribed instances in which the life of the mother is threatened; nonetheless, it follows the pill and IUD in frequency as a method of family planning.

Registration of births and deaths, though legislated and under the jurisdiction of the Ministry of Health, is not operating as reliably as would be required for efficiency in MCH planning or general policy development. Only 22 of 148 chiefdoms in Sierra Leone have compulsory registration and only Freetown has a full-time registrar.
SUPPORT FOR TBA TRAINING AND UTILIZATION: POLITICAL, FINANCIAL, AND TECHNICAL

Much of the impetus for the Government’s TBA training programme came from within the MCH Division, where it was recognized that:
— most deliveries in Sierra Leone are conducted by untrained TBAs
— provision of modern medical care for the majority of the country’s population is far in the future
— there is a need to reduce the high incidence of neonatal tetanus.
UNICEF’s willingness to provide some financial support for the retraining of TBAs helped to get the programme under way in November 1974.

A national precedent for a TBA training programme existed as well, though to what extent it was taken into consideration in the development of the Government programme is unknown. In August and October of 1972 the Nixon Memorial Hospital in Segbwema undertook two 1-day TBA training courses to reduce the alarming number of neonatal tetanus cases in the hospital’s catchment area, where at least 60% of the women deliver at home. The demonstrable success of this training initiative is encouraging.¹ Since December 1974, the hospital has given 1-day courses to 240 TBAs, with a concurrent reduction in the rate of admissions to the hospital for neonatal tetanus: 106 in 1972, 83 in 1973, 54 in 1974, 55 in 1975, and 36 in 1976.¹

Considerable support was given to the idea of training TBAs by the Health Education Unit of the Ministry of Health, and some limited background research on cultural patterns relating to pregnancy was undertaken by an official within that branch. Most importantly, support was gained from the Health Sisters of the district hospitals where TBA training was to be undertaken, as in most instances they would ultimately be responsible for the day-to-day operation of the training programme. UNICEF provided some general funding, a Le 15.00 stipend per trainee for the 3-week training period, and a UNICEF midwifery kit for each trained TBA. Other necessary funding was found within the MCH operating budget.

INVENTORY OF TBAS

No formal inventory of the country’s TBAs has been undertaken, either before or since the first governmental training programme was initiated in November 1974. However a rough estimate can be made by multiplying total births per year (140,000) by 70% (estimate of proportion delivered by TBAs) and dividing by 7.5 (the number of births attended yearly by each TBA, as estimated from the author’s questionnaire) = 12,600 TBAs.

RECRUITMENT OF TBAS FOR TRAINING

Prior to the training courses, local Government officials and medical

¹ R. W. Coles, op. cit.

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personnel in the districts concerned are requested to collect the names and places of residence of local TBAs, as well as information on the extensiveness of their practice. Information on the upcoming training programmes is given to Paramount, District, Section, and Town chiefs and other local dignitaries, who are encouraged to relay names of local TBAs to the appropriate district hospital. In addition, radio broadcasts are made to ensure that the course is known to all so that TBAs from all over the district can nominate themselves directly.

The data collected on TBAs are forwarded to the MCH Division, which ultimately makes the selection of candidates for the course with or without an interview. Selection is based on age and experience in birth attendance as well as the TBA’s expressed interest in training, or a recommendation from local authorities.

According to one coordinator of the TBA training programme, a major problem is locating the TBAs and persuading them to attend the course. Those most reluctant to be retrained are elderly Sande Society TBAs or majos, whose traditional beliefs are firmly entrenched in their practices and who are indignant at the idea of being taught midwifery skills by outsiders. Initial contacts with TBAs must therefore be conducted with extreme sensitivity and their status and role in the community must be recognized at all times.

THE TRAINING PROGRAMME

Planning of the training programme

The planners of the TBA programme have included the Director of the MCH Division, public health personnel, nursing tutors, midwifery tutors, health educators, a nutritionist, and other members of the MCH Advisory Committee. The core outline for the programme was developed in Freetown; details, however, have been left open, allowing leeway for the district hospital trainers to develop the curriculum and teaching material as they see fit. At the outset of each training session, the trainers administer a questionnaire orally to each TBA so as to acquire information on their practices and concepts of health and disease. This baseline information is then taken into consideration in the selection of realistic learning objectives.

Objectives of programme

The overall objective of the training programme is to reduce mortality rates by equipping TBAs with the skills and knowledge to fill unmet basic MCH needs at the village level and to act as independent collaborators within the MCH Division. Specific objectives are: (1) to teach women (TBAs) simple antenatal care, safety and cleanliness at all times, particularly during delivery; (2) to teach the care of the umbilical cord to

1 These planners had also been involved in the training programmes for village maternity assistants and MCH aides (see page 83).

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prevent neonatal tetanus; (3) to recognize abnormalities during pregnancy and labour and to refer such cases early for more skilled supervision.\(^1\) The MCH Division has defined the work which the trained TBA is expected to master as being "essentially practical in nature"; this includes midwifery, child care, hygiene, home visiting, health and nutrition education, and family planning. More details of what the Division hopes the trained TBA will be able to do can be found in Table 3. This is the syllabus which is given to the district hospital tutors as their guide for the 3-week training session. It will be noted that the course serves a dual purpose: it is both a TBA training programme and a refresher course for village maternity assistants, many of whom, when no longer under Government supervision, reverted to the traditional delivery practices of TBAs.

Table 3. Sierra Leone traditional birth attendant training programme syllabus

| Three-week refresher/training programme for village maternity assistants and traditional birth attendants |

<table>
<thead>
<tr>
<th><strong>First week: Maternal care</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday</strong></td>
</tr>
<tr>
<td>Registration</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>The role of the village maternity assistant/MCH aide/TBA at the village level</td>
</tr>
<tr>
<td>Personal hygiene</td>
</tr>
<tr>
<td>Reproductive system</td>
</tr>
<tr>
<td>Case-finding</td>
</tr>
<tr>
<td>Inspection of the home regarding its suitability for delivery</td>
</tr>
<tr>
<td>Home visiting</td>
</tr>
<tr>
<td>Booking patient for antenatal care</td>
</tr>
<tr>
<td>Examination of the patient at the first visit</td>
</tr>
<tr>
<td><strong>Tuesday</strong></td>
</tr>
<tr>
<td>Antenatal clinic; operation of the clinic</td>
</tr>
<tr>
<td>Examination during antenatal period</td>
</tr>
<tr>
<td>Nutrition during pregnancy</td>
</tr>
<tr>
<td>Anaemia</td>
</tr>
<tr>
<td>Recognition of the danger signs in pregnancy and when to refer to hospital for delivery</td>
</tr>
<tr>
<td>Preparation of mother for labour and delivery</td>
</tr>
<tr>
<td>Equipment for delivery</td>
</tr>
<tr>
<td>Labour—first, second, and third stages; management and danger signs in each stage</td>
</tr>
<tr>
<td>Record-keeping during labour and delivery</td>
</tr>
<tr>
<td>Demonstration of delivery</td>
</tr>
<tr>
<td><strong>Wednesday</strong></td>
</tr>
<tr>
<td>Care of the newborn</td>
</tr>
<tr>
<td>Resuscitation</td>
</tr>
<tr>
<td>Care of the umbilical cord—at birth and until the cord drops off (intervene participants as to what is used to cut and dress the cord in their districts)</td>
</tr>
<tr>
<td>Examination and bathing of the newborn</td>
</tr>
<tr>
<td>Care of the eyes</td>
</tr>
<tr>
<td>Passage of urine and meconium</td>
</tr>
<tr>
<td>Cleaning up after delivery</td>
</tr>
<tr>
<td><strong>Thursday</strong></td>
</tr>
<tr>
<td>Care in the puerperium</td>
</tr>
<tr>
<td>Examination of the mother: breast, abdomen, fundal height, lochia, bladder; urine retention problems</td>
</tr>
<tr>
<td>Establishment of breastfeeding</td>
</tr>
<tr>
<td>Swabbing and vulval toilet</td>
</tr>
</tbody>
</table>

\(^1\) WHO Regional Office for Africa, unpublished information.
Table 3. (continued)

<table>
<thead>
<tr>
<th>Monday</th>
<th>The maternal and child health clinic (under-5 clinic)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The need for the infant to be seen regularly even if well</td>
</tr>
<tr>
<td></td>
<td>Immunization: programme and needs</td>
</tr>
<tr>
<td></td>
<td>The use of antimalarials</td>
</tr>
<tr>
<td></td>
<td>The weight chart</td>
</tr>
</tbody>
</table>

| Tuesday | Feeding and nutrition |

<table>
<thead>
<tr>
<th>Wednesday</th>
<th>Nutrition (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Weaning foods</td>
</tr>
<tr>
<td></td>
<td>Danger periods in the child’s life</td>
</tr>
<tr>
<td></td>
<td>The high risk or “at risk” child</td>
</tr>
<tr>
<td></td>
<td>Malnutrition: recognition, prevention, and treatment</td>
</tr>
<tr>
<td></td>
<td>Beliefs and customs associated with childbearing and child-rearing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thursday</th>
<th>The common diseases in children: recognition and emergency treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergency treatment of fever, convulsions, frequent stools, and vomiting</td>
</tr>
<tr>
<td></td>
<td>Relationship between some communicable diseases and infections and nutrition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Friday</th>
<th>Community health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental sanitation</td>
</tr>
<tr>
<td></td>
<td>Home visiting</td>
</tr>
<tr>
<td></td>
<td>Relationship between village maternity assistant, MCH aide, other health and social workers and the TBA in the village (vital registration)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Saturday</th>
<th>Evaluation of the course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presentation of certificates to TBAs and issuance of UNICEF kits</td>
</tr>
<tr>
<td></td>
<td>Closing</td>
</tr>
</tbody>
</table>

Third week: Practicals and family planning

<table>
<thead>
<tr>
<th>Monday–Friday</th>
<th>Health centre practice and observation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home visiting: family planning</td>
</tr>
<tr>
<td></td>
<td>Child spacing and need for this</td>
</tr>
<tr>
<td></td>
<td>Continuation of practical experience</td>
</tr>
</tbody>
</table>

The trainers of TBAs

The primary trainers of TBAs have been the district hospital Health Sisters, part of whose job description is the training and supervision of MCH personnel. For the sake of continuity and efficiency, the same Health Sisters have staffed the training programmes in their districts or provinces since the programme’s beginning (5).

An additional consideration in using district hospital employees as trainers has been the convenience as regards housing, transport, and availability of qualified staff. The use of already “on site” trainers has also spared the short-staffed Health Ministry the necessity of releasing training.
personnel full-time from their regular job assignments during the 6 weeks of yearly TBA training.

Various aspects of the TBA training programme

The MCH Division is primarily responsible for nationwide TBA training and trained 247 TBAs from November 1974 to November 1976. No more than 30 trainees are accepted for each of the twice-yearly 3-week residential training sessions. At these sessions, a stipend of Le 5.00 per week is provided to each trainee. The programmes are operated at the district level and have been held in Lumley and 3 provincial centres since the outset (Table 4). While TBA classes are based at district hospitals, use is made of dispensaries, health centres, and village homes for practicals and demonstration purposes during training. It has been recognized that if training is done under conditions that closely resemble the actual working conditions of the village TBA, the trainee will find it easier to put her newly learned skills into practice once she completes the course.

Table 4. Traditional birth attendants trained in Government programme, Sierra Leone, 1974–76

<table>
<thead>
<tr>
<th>Dates of training session</th>
<th>Home districts of trainees</th>
<th>Training centres</th>
<th>No. trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>4–23 November 1974</td>
<td>Bo, Pujehun</td>
<td>Bo</td>
<td>30</td>
</tr>
<tr>
<td>10–26 March 1975</td>
<td>Moyamba, Bonthe, Bombali,</td>
<td>Magburaka</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Tonkolili</td>
<td>Bo</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Magburaka</td>
<td>30</td>
</tr>
<tr>
<td>25 November–12 December 1975</td>
<td>Kenema, Kailahun, Koinadugu,</td>
<td>Kenema</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Kono</td>
<td>Magburaka</td>
<td>10</td>
</tr>
<tr>
<td>15 March–2 April 1976</td>
<td>Moyamba, Bo, Pujehun,</td>
<td>Bo</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Western Area &amp; Koya</td>
<td>Lumley</td>
<td>29</td>
</tr>
<tr>
<td>8–26 November 1976</td>
<td>Kailahun, Kenema, Kono,</td>
<td>Bo</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Western Area &amp; Koya</td>
<td>Lumley</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: reference 8.

Non-governmental training programmes

The only formal training recognized by the Government is that which it sponsors. Nixon Memorial Hospital is continuing its training efforts, however, and other mission hospitals have begun TBA training schemes as well. Like the Government programme, the purpose of the Nixon training programme is to reduce maternal and neonatal mortality and morbidity. As a limited agency, however, the hospital’s immediate goal is to train TBAs in and around its catchment area without particular regard to supervision of the trained TBAs or developing a system of MCH care. Between late 1972 and 1975, the Nixon Hospital staff conducted a total of 13 1-day courses for 240 TBAs representing 82 villages in the Segbwema region (3).
Course content and training methods

The Government TBA training programme lasts 3 weeks. During the first 2 weeks only classroom teaching takes place. The major topics covered are maternal care, child care, and community health (see Table 3 for details). The Health Sister is responsible for the training and usually carries out the bulk of the teaching, calling on doctors or midwives for assistance as specific learning objectives require.

While some demonstrations and practical experience are featured in the first 2 weeks of training, it is thought that much of the MCH course content would remain theoretical or be lost to the freshly trained TBA unless she were given the opportunity to practise under supervised conditions. The third week of training therefore is almost entirely practical, with family planning being the only newly introduced subject matter. Home visits and observation and assistance in the training centre's clinics and general operations thus constitute the final week of training.

The course concludes with a formal closing session, course evaluation, and the presentation to each graduate of a training certificate bearing her photograph and a UNICEF midwifery kit.

Evaluation of teaching/learning

Throughout the course, the trainer evaluates the TBA's comprehension of presented material. No formal tests of any kind are administered, although practical performance is evaluated in the third week in order to guide the trainee's practices and answer any questions she may have concerning procedures, etc. At the close of the second week of training, an evaluation of the course is held in the form of an open discussion between the trainers and trainees, notes of which are taken for future reference.

ADMINISTRATIVE ARRANGEMENTS FOR UTILIZATION OF TRAINED TBAS

The Government does not intend to create an employer–employee relationship with the privately practising trained TBAs, and no arrangements are made for further TBA training or revision sessions. It does, however, attempt to keep contact with them through supervisory visits, although in practice these have been rare (see below). In addition, replenishment of the UNICEF kit serves as a governmental reward system for the trained practising TBAs. The contents of the UNICEF kit are standard, except for the forceps and stethoscope, which the TBA is not intended to master. No medications other than mentholated spirit, disinfectant, and cord powder, or sometimes methylroseaminilium chloride (gentian violet) are issued to the TBA. (Differentiation and proper administration of the above preparations are based on smell, colour, and distinctly marked bottles because nearly all the TBAs are illiterate, which
fact was largely responsible for the decision not to issue them more potent medicaments.)

A close supervisory relationship between the MCH Division and the trained TBAs was envisaged by the original planners of the training programme (see page 86) so as (1) to see that the TBAs put into practice knowledge acquired during training, (2) to enhance the progress of their activities, (3) to review their performance, and (4) to give guidance and advice. In practice, however, supervision has been minimal. As discussed earlier (pages 82–83) the supervisory network of the MCH Division is inadequate even to meet the needs of the MCH aides and the village maternity assistants, who are Government employees. It is not surprising, therefore, that the independent TBA is rarely visited. The official TBA supervisors are the local Government midwives or Health Sisters originally responsible for the TBA’s training. Supervision is supposed to consist of periodic unannounced visits to discuss the TBA’s work, examine the UNICEF kit, check on reporting of births, and evaluate the conditions of hygiene of the TBA’s house. In contrast to other countries in which inspection of the UNICEF kits showed them to be unused and primarily valued as a status symbol, supervisor reports from Sierra Leone have indicated that most kits are well used.

Despite their lack of sustained contact with medical personnel, the trained TBAs’ exposure to the formal health system seems to have improved their rapport with the Government health services. Observations by the author as well as by provincially based hospital personnel suggest that the trained TBAs are more willing to refer complications of delivery. Formal acceptance of the trained TBA is growing among health professionals, but total acceptance lies in the future. The TBAs continue to be acceptable most of all to the village community, which in this author’s opinion is their most valuable characteristic.

The establishment of a comprehensive primary health care system incorporating TBAs would require effective supervision of these workers. As the Nixon Memorial Hospital experience demonstrated, even with minimal training TBAs who are in contact with medical personnel can make a significant impact on the population they serve.

**PERFORMANCE OF TRAINED TBAS**

The study of the Nixon Memorial Hospital TBA training programme is the only one in Sierra Leone that compares the performance of the TBAs before and after training. It is important to note here, however, that not all consequences of training have been positive. Villagers with raised expectations of the trained TBA’s new skills have become scornful on discovering limitations in her methods. As for the TBA herself, with no firmly founded belief that her newly learned practices do indeed work, with

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1 R. W. Coles, *op. cit.*
her integrity challenged, with loss of her position in the Sande Society threatened, and with no visible support from authorities, she may, quite understandably, revert to some of her old practices. Similarly, when the UNICEF kit is depleted the TBA may resort to her old “medicines” and implements, especially when visits to the hospital are fruitless because the hospital is itself short of supplies.

CONCLUSIONS AND RECOMMENDATIONS

Given the rural nature of Sierra Leone's population, the shortages of staff within the MCH Division, the lack of adequate medical supplies and facilities, and the inadequate transport system, it is clear that the goal of improved MCH care can most realistically be attained by the utilization of appropriately trained and supervised health workers at the village level. TBAs can make up a large proportion of that workforce. The training of TBAs makes sense for other reasons: (a) TBAs will continue to practise whether they are trained or not; (b) the 3-week training session costs little; (c) TBAs are independent practitioners and thus do not require Government expenditure; and (d) they are influential members of their society, they desire to remain in the village, and people there accept them.

While the trained TBA's functions might be expanded in the future, this does not seem feasible at present. Such an expansion would necessitate serious commitment to building a strong back-up support system, including transport, medical staff, facilities for referral, and especially supervision.

It would seem appropriate to continue training MCH aides or other village health workers to staff maternity centres and outpatient clinics, especially if they collaborate with trained TBAs. Recognition and acceptance of the TBA is an acknowledgement that traditional providers of health care are already in practice in the country. If adequately trained and supervised, these practitioners can supplement the more orthodox MCH care envisioned for the country. To achieve holistic MCH care in Sierra Leone one must understand the Sande Society structure within which the TBA works. As Kenneth Little states:

Rather than attempting to change the essential nature of systems or mindframes, less energy is spent for more efficient usage of limited resources by extrapolating on the similarities among our various systems and enlarging our framework of tolerance (4).

The Ministry of Health's efforts to work with the traditional midwife have been important and significant actions. However, the TBA's role within the health care system needs to be more clearly defined, her activities need to be better supervised, and her effectiveness needs to be evaluated. Only then will she be able to carry out the essential functions for which she has been trained and win full acceptance as a member of the health care team.
REFERENCES


Annex

INFORMAL QUESTIONNAIRE ADMINISTERED TO TBAs¹

1. Name.................................................................................................................................
2. Age ...................................................................................................................................
3. Religion ..............................................................................................................................
4. Can you read or write? ........................................................................................................
5. (a) Are you married? ...........................................................................................................
   (b) Do you have any children? .............................................................................................
   (c) How many children have you borne? ............................................................................
   (d) How many of that number are alive? ............................................................................
   (e) If all are not alive at what ages and how did they die? ..................................................

................................................................................................................................................

6. What is your occupation? ..................................................................................................
7. How did you learn to be a midwife and how long have you practised?
................................................................................................................................................

8. Why did you decide to be a midwife? ................................................................................
................................................................................................................................................

¹ Before administering the questionnaire the author established that the interviewee considered birth attendance to be a major interest of hers. In each case the interviewee had been identified by 3 or more village women as a masarikat (one who practises midwifery).
9. How many deliveries have you had in this past year (since the last rice harvest/burning etc.)?

10. Do you report these to anyone?

11. Can anyone be a midwife?

12. Are you teaching anyone to be a midwife now?

13. Are you a herbalist (leaf woman) as well as a midwife?

14. Is there a herbalist with whom you consult?

15. Where do the women come from (reside) whom you deliver?

16. Where do you conduct the deliveries?

17. Please describe your job (the delivering of babies) to me.

18. Is the job of delivering babies an important/useful one in the village?

19. What do the women/folk think of your job? The men/folk?

20. Are you paid for your services in any manner?

21. How do you know if a woman is pregnant?

22. Do the women come to see you if they think they’re pregnant?

23. If a woman becomes pregnant and doesn’t want to be, can she do anything to terminate the pregnancy? What?

24. If a woman comes with questions or complaints about her pregnancy, what can you do?

25. Do you ever refer them to another herbalist (or other indigenous specialist such as the Moray man, the Alpha, juju man, etc.) or to the hospital/clinic?

26. Do you do anything to prepare a woman for delivery?

27. Do you give an enema?

28. How do you know when true labour has started?

29. Do you do a vaginal examination?

30. In what position does a woman usually deliver? Why?

31. How long is a woman usually in labour?

32. Why do some labours take “too long” (longer than the time given in answer to question 31)?
33. Can you do anything to help the baby come? ..............................................................
34. Do you give any medicines during labour if it’s taking “too long”? What? ......................
35. Have you ever seen heavy bleeding before or after delivery? Why does this sometimes occur? .................................................................................................................
36. Can you do anything if that happens? ............................................................................
37. Have you ever seen a perineal tear? an anterior tear? Can you do anything to prevent that? What can you do if that happens? .................................................................................................................
38. How long after the baby comes should the placenta come? .......................................)
39. What can you do if the placenta doesn’t come right away (within the time given in answer to question 38)? .................................................................................................................
40. What do you do if the baby doesn’t breathe immediately? ..............................................

41. When and how do you cut the cord? .............................................................................
42. What do you do to the cord after you cut it? ..................................................................
43. Have you ever seen a baby or new mother develop fever after delivery? Why does that occur? Can you do anything about it? .................................................................................
44. Why do some women deliver small babies? .................................................................
45. Have you ever delivered twins? Why do some women have twins? ..............................

46. Have you ever delivered a baby who did not come head first? What did you do? ........
47. Why do some babies die soon after delivery? ...............................................................

48. Have you ever seen a baby born with some deformity? Why does this sometimes occur? What can be done for this child? .................................................................................................................

49. If a woman wants to become pregnant, but can’t, can you do anything to help her conceive? .................................................................................................................

50. Why can’t some women become pregnant? ....................................................................
51. Have you ever heard of family planning? ....................................................................

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CHAPTER 5

SRI LANKA:
EXPLORING THE USE OF THE TBA AS A LOW-COST MEANS FOR FAMILY HEALTH

KATHLEEN M. WEST*

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INTRODUCTION

Sri Lanka, a compact island republic, is situated in the Indian Ocean and is separated from the subcontinent by a narrow strip of shallow water called the Palk Strait. The country is largely covered by a network of motorable roads and railways and a system of telephones and radios. The literacy level (80%) is one of the highest in South Asia (9). The significance of these factors as regards the population's access to and utilization of health services will be elaborated further on.

Conventionally, Sri Lanka is considered as having two climatic zones: the wet zone consists largely of the southwestern part of the country, the dry zone of the northeastern part. No part of the country is, however, completely dry. Though the dry zone offers the greatest potential for future development, the wet zone—which constitutes about a fourth of the country’s land area—contains about 70% of the population, most of the cultivated land, and most of the nation's industries (9).

Sri Lanka is one of the most densely populated agricultural countries in the world, with a total population of about 14.3 million in 1978. With an average of about 1460 inhabitants per km², its density is more than 8 times that for the world as a whole. As in most countries, Sri Lanka's population density varies considerably from one geographical area to another. Among the 9 provinces the density varies by a factor of 18; among the 22 districts it varies by a factor of 50. As will be shown later, these differences in population density and climate have deeply affected the distribution of health resources, including health personnel.

The inhabitants of Sri Lanka belong to an interesting combination of ethnic and religious groups. The predominant ethnic group (72%) are the Sinhalese, most of whom live in the wet zone. The next largest group (20%) are the Tamils, of whom about 11% are Sri Lankan and 9% Indian, and most of whom inhabit the dry zone. Moors compose about 7% of the population, and Burghers, Malays, and others constitute the remaining 1%. Buddhists form the largest religious group (67%) and consist mainly of

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